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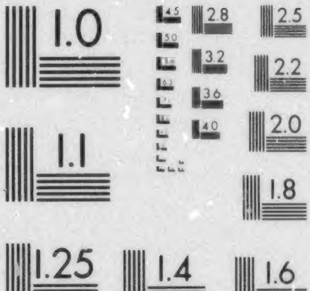
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ABSTRACT

These activities help high school students develop an understanding of nuclear weapons within the context of human beings making choices. Students learn to evaluate information and to identify the political stand or bias in what they hear and read. To record their own growth and change, students are encouraged to keep a journal. Teachers can choose from among activities that can be used in a variety of courses, including American literature, science, civics, U.S. history, legal education, and ethics. The activities in the first three sections--"Learning to Learn about Nuclear Weapons," "On Violence," and "Constructing a Value System"--are designed to help students struggle with issues and dilemmas that complicate their thinking and keep them from accepting simple solutions. The next three sections--"Nuclear Weapons and the Arms Race," "The Cold War," and "Negotiating"--help students become familiar with science, history, and technical information about nuclear weapons and the arms race. In the section, "Complexities of the 80's," connections are made with world issues that are intimately related to the arms race. In the final section, "Making a Difference," students are asked to think about prevention. A reference list of 20 films is included. (RM)

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DECISION MAKING IN A NUCLEAR AGE*

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a 3 to 12 week unit for high school students and their school communities in an expanded and revised draft.

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CHAPTER I:

INTRODUCTION

The Decisionmaking in a Nuclear Age curriculum is specifically designed for high school students and their school communities to promote an understanding of nuclear weapons within the context of human beings making choices. Central to the design of the curriculum is the assumption that nuclear education is a study of being human. Students take part in discourse about this critical and controversial issue and heighten their concern for the life we live in common so that the future will be better than the past. More than nuclear facts, interpretations and opinions, this course makes use of the classroom as a vehicle to develop the social insight, interest and skills students need to create and participate in a democracy. John Dewey reminds us, "Democracy needs to be invented and reinvented." This course is an opportunity for students to examine and reinvent a democracy.

As society becomes more complex and as we develop more deadly ways of dealing with human conflict, the need for thinking about how we make decisions and for changing the way we solve world problems is increased. Beyond learning the nuclear information, students are encouraged to challenge their own assumptions about themselves and the world and to recognize that history is not inevitable; every decision they make, or leave to others, involves a choice.

Why Study Nuclear Weapons?

Perhaps the most striking reason for including nuclear education programs in our schools is that adolescents are asking for help in understanding a world that seems out of control, uncertain and without choices. The evidence that adolescents are deeply affected by the fear of nuclear war demands a concerned response from us, as adults and teachers.

Results of the APA Task Force report on the "Psycho-social Aspects of Nuclear Developments" (1982, p. 89), suggests that the threat of nuclear war has penetrated deeply into the consciousness of adolescents and children. According to the authors, Drs. William Beardslee and John Mack, the strongest finding was: "a general unquiet or uneasiness about the future and about the present state of nuclear weapons and nuclear power. There is a particular uncertainty and fear about nuclear war or the limiting of such a war should it occur, and the possibilities of survival."

In October of 1982, Educators for Social Responsibility sponsored a day-long symposium on nuclear issues called "Day of Dialogue." Thousands of questionnaires were distributed in high schools across the country. Results from 2,000 randomly selected samples, taken from high schools in Massachusetts, Wisconsin, Oregon and California, showed that 87% of the students thought there would be a nuclear war in the next 20 years. 90% felt that if a nuclear war occurred, the world would not survive. 81% claimed that thoughts about nuclear war affected their job plans. 81% also said it affected their hopes for the future.

In "The Threat of Nuclear War: Psychological Impact," Brewster Smith ties young people's inability to make commitments to their anxiety about nuclear war:

> We know that commitments come with more difficulty to young people of the present day than to predecessor generations; we know that the impulsivity that underlies many forms of problematic behavior is fostered by a reckless orientation to the "here and now." We know that a good many young people are seriously troubled by the prospects of nuclear war. We therefore have good reason to suppose that the threat of nuclear war must be a substantial contributor to orientations on the part of the young that are the focus of appropriate social concern; that, indeed, as the threat becomes more salient, the psychological costs along these lines may be expected to increase. (pp. 13-14.)

Daniel Yankelovich (1982), summarizing a considerable body of survey data in December, 1982, concludes that "Young people in the United States and other countries of Western Europe are unhappier today and under greater tension than they were a generation ago, or perhaps even a few years ago." Citing the 1982 Michigan Institute of Social Research data, Yankelovich linked this shift specifically to the perceived threat of nuclear war and the sense of futurelessness which results from it. Students show "a sense of the future as being very threatening, as perhaps there not being a future, a future of grimness, of shortages, or greater difficulty, a closing in of horizons." Students are struggling to prepare for a future without the belief that there will be one.

The very existence of curricula on nuclear issues may relieve some adolescents' anxiety. Knowing that some adults care enough to inform students and to hear their fears about the arms race contradicts their perception of the ineffectual silence among the general adult population. The activities in this curriculum emphasize seeking answers through community discourse.

Approach

There is a danger that when a nuclear curriculum is not taught appropriately students will feel overwhelmed or more powerless. These materials provide adolescents with information and opportunities to challenge their thinking, and voice their concerns, as well as develop a feeling that they can make a difference and that they are not powerless.

Since many people believe that adolescents' normal growth depends on a social structure which grants young people a place in society, this course aims to help students consider how they can become actively involved in ensuring their future. Many students may move from a feeling of despair and hopelessness to an awareness that we live in a time of choice. One student who took the course wrote, "To be frank, I am quite surprised by my own reaction. Even a hard-core cynic like me can change, and if I can, I'm sure everybody can. I think I'm ready to charge into the thick of it."

The course has been tested for two years in high school classes. Students across the country report that they think the course should definitely be taught, warning us not to tell them what to think, but rather to teach them how to think. As one student wrote, "...make sure the teachers don't have any strong feelings about it so they don't brainwash the kids. We need to make up our own minds."

It is important that educators support students' responses to critical world problems while being careful not to enlist them in their own political campaigns. Nuclear issues require coping with ambiguity and uncertainty, allowing ourselves to "not know" all the answers. A classroom environment, where controversy and debate are encouraged and differing perspectives are analyzed and challenged, can prepare students to make informed decisions themselves. By insisting that questions be left open and ongoing, teachers encourage students to listen without rushing to judge important ideas that are not their own.

Consider the following excerpt from John Stuart Mill, On Liberty:

> A person who has a strong opinion must admit
> the possibility that his opinion may be
> false, he ought to be moved by the consideration
> that, however true it may be, if it is not
> fully, frequently and fearlessly discussed, it
> will be dead dogma, not a living truth.

The following materials and activities have been chosen to encourage students to struggle with "the truth", to develop a critical view about information and to learn how to formulate questions. Some questions and themes are repeated throughout the materials to give students an opportunity to consider them in a variety of situations. Students learn to evaluate information from a new frame of reference, to identify the political stand or bias in what they hear and read. Many teachers have found it helpful to acknowledge their own particular bias as they struggle to provide a classroom experience which explores many points of view. Here the student joins with the teacher in a cooperative position and takes part in the formulation of questions, answers, and methods of investigation. Keeping a journal is a key element in the learning process because it enables students to record their ideas, think about their own thinking and how it changes, encompassing more complex reasoning.

Student Journals

"One advantage in keeping a diary is that you become aware with reassuring clarity of the changes which you constantly suffer and which in a general way are naturally believed, surmised, and admitted by you, but which you'll unconsciously deny when it comes to the point of gaining hope or peace from such an admission. In the diary you find proof that in situations which today would seem unbearable, you lived, looked around and wrote observations. That this right hand moved then as it does today, when we may be wiser because we are able to look back upon our former condition and for that very reason have got to admit the courage of our earliest striving in which we persisted even in sheer ignorance."

--Franz Kafka - Diaries

Journals can be a valuable supplementary activity for the nuclear curriculum. Daily autobiographical writings can chart for each student the process and progress of the course, illuminate his or her response to it, and even function as a student advocate and support system.

A journal, like an unfinished poem, story or essay remains alive, open, incomplete similar to the process of history itself: awaiting further entries. Within the framework of this course, the journal becomes a graphic and spontaneous visual and verbal procedure for each student and teacher to record ongoing encounters with the moral issues that emerge from the course material. By keeping journals, students will in effect be bearing witness themselves to their own living history; responding to their own growth and change within the course.

Every individual perceives the world through his or her own experience and understanding. A student's insights, questions, memories have an internal reality that is both unique and valuable. If s/he can record these perceptions with honesty, s/he will have taken an important step toward self-understanding. What s/he chooses to confront in his or her journal can tell him or her much about who s/he is. Author Joan Didion says: "I write entirely to find out what I'm thinking, what I'm looking at, what I see and what it means."

Student and teacher should plan to write in their journals at least as often as the class meets. The teacher may wish to set aside ten minutes at the end of class to work on journals or to make the journal all or part of the homework assignment. Encourage students to date each entry for a sense of continuity and to number each page. Suggest that journals can be both a visual and a verbal document. Length of entries will quite probably vary. Students should feel free to write as much or as little as they deem necessary. Some very informal discussion of writing skills may or may not be helpful at the onset, for example:

--the importance of clear-eyed observation

--the ability to describe a space, a time, a mood or an action in precise and vivid detail

--the personal integrity of the writer (basing writing on his or her own experiences and observations)

Entries may be spontaneous responses or in answer to teacher questions or directions. They might respond to each day's course material, class discussion and group dynamics. Entries may be autobiographical accounts of personal experiences that relate (no matter how tenuously) to coursework. The journal provides an arena in which students can synthesize and connect the various facets of their lives and educations. Students may wish to make drawings in their journals, illustrations or explanations. They might record conversations with parents, friends, neighbors about the controversial issues raised in the course. They might respond to newspaper and magazine clippings, relevant cartoons, photographs and quotations.

The teacher can pose special questions or assignments to emphasize course material or to ease communication, such as the following: At what moment in this class do you recall being aware that some individual in the group was in the process of learning and changing? Would you tell about it? At what particular time in this class do you recall making a contribution or a communication that took trust and courage and which made you aware of learning and changing in yourself? Would you share it with us? If you found it difficult to muster up that courage to communicate directly to the group, would you share with us those inhibiting factors that held you back? And would you share that communication with us here -- now?

The journal can easily facilitate two-way communication between teacher and individual student. The teacher has a chance to respond differently and thoughtfully to each journal, perhaps choosing to insert between the pages clippings or quotations or pictures that seem particularly pertinent to an individual journalist's ideas and questions.

Student journals should be considered completely confidential. Any journal sharing in the classroom needs to be agreed upon by the students sharing, and what is shared should remain confidential to the class. The safer a student feels writing in the journal, the more fully s/he wil explore his or her own thoughts and feelings.

Students should be encouraged to shape a personal set of evaluative criteria to apply to their own document. These might include: continuity of thought, personal integrity, variety, intellectual depth, detail, color, clarity, use of metaphor (verbal and visual), aesthetics, honesty. Sharing (when agreed upon) journal excerpts between students and teachers and exposure to the work of published diarists can aid in widening literary responses and in fostering self-evaluation. Journals may be collected, read, and responded to by the teacher at regular intervals or the choice may be made to maintain individual privacy. When grades must be assigned for classwork, some teachers have given students an "A" for completing all journal assignments based on the belief that it is inappropriate to judge personal statements with grades.

Community Support

Some teachers have found it useful to send home a notice announcing the unit or course and asking parents and community people to come in and share their ideas with students. This encourages an open atmosphere of dialogue among people with many perspectives, a healthy relationship of sharing with parents and their children, and a signal that the course intends to broaden rather than limit thinking.

Community Resources

Whenever possible, have resource people come in to share their perspectives with students. Teachers have found that students are eager to interact with adults around the issues. This is an opportunity to have students consider how they decide who to believe. One student wrote after a lecture supporting a nuclear build-up:

> Hearing the woman from Fletcher's talk about the need for more nuclear arms was scary. Not because of what she said but because of what a nice person she was. She doesn't fit my stereotype of a war-monger so it was hard to resist the information. I wanted to hate her but I really liked her. In fact I liked her better than the so-called peace-movement people. It made me surrender my stereotype and realize that you have to listen carefully to the information and not get too involved with the personality. But so much of what we believe is who tells us or how they tell us. It's not really who to believe but what to believe! --a ninth grade student

Format

These materials are part of an ongoing process in curriculum development and teacher training. The format we have chosen is intended to present thought-provoking materials followed by ways of using them and connecting them to previous lessons for other topics. Many of these materials have been tested in classrooms and student comments have been included here to represent the range of reactions in those classes. We would appreciate your input about student and teacher responses and struggles to include in our continuing process of developing the materials and teaching techniques.

The material is presented under the title "Activity". The suggestions for teachers, which sometimes include supplemental student activities, are presented under the title "Connections".

These materials have been used in a variety of courses, including American Literature, Science, Civics, American History, Law and Society, and Ethics. Teachers have effectively spent between three and eighteen weeks covering some of the materials. The effectiveness increases with the length of time as students are able to confront the many facets of this complex subject. Whereas the factual information can be transmitted in a relatively short time, an understanding of how complex decision making is and a commitment to taking part in the decision making process require a longer time to develop.

Selection of Materials

Obviously there are too many lessons to include in an average unit or course on this subject. A wide variety of activities and materials are offered to encourage teachers and students to choose the lessons that are priorities. All teaching and learning is a selection process based on our own assumptions and decisions about what we think is important. If you need assistance in your decision making about developing a course plan, feel free to get in touch with us.

Materials

The opening three sections (Learning to Learn, On Violence, and Constructing a Value System) are designed to help students struggle with issues and dilemmas that complicate their thinking and keep them from accepting simple solutions. The questions raised in these sections are central to the goals of curriculum. As students investigate patriotism, decision-making, loyalty, violent actions and responses, self-preservation, self-interest, and national defense, they develop their notions of justice and responsibility.

In the following sections (Nuclear Weapons and the Arms Race, The Cold War, and Negotiating), students become familiar with science, history, and technical information about nuclear weapons and the arms race. The lessons help to demystify nuclear weapons and give students facts and vehicles for understanding complex information.

In the section Complexities of the 80's, connections are made with world issues that are intimately related to the arms race.

In the final section (Making a Difference), students are asked to think about prevention. Activities are provided to help students connect history to their daily lives and to consider the consequences of their actions. Students are encouraged to move beyond discussion and take action on issues important to them. Teachers and students, together, struggle to create a more socially active community that demands informed decisionmaking, personal courage, and risk-taking.

CHAPTER II:

LEARNING TO LEARN ABOUT NUCLEAR WEAPONS

Activity 1: What is this course about?

"You know, you could really use kids in something like this, I mean it's really dangerous. You could use kids..."

Connections

Students, after reading the opening statement, should consider what the student may have meant and why the student may have felt that way. What are their concerns about nuclear weapons and war in school? What are their expectations? Write in journals.

We have found in almost all classrooms where materials on nuclear weapons and war were to be used, that students expressed a series of concerns: that the course would be a form of propaganda, that there was nothing anyone could do about the situation anyway, that it was too depressing. The following statements made by high school students either in class or in their journals suggest the range of their distrust of the usefulness of such a curriculum.

--"I hope you're going to tell us the good side of nuclear war."

--"This sure looks like anti-nuclear propaganda to me."

--"I do think such a course should be taught but I would make sure the teacher didn't have any strong feeling about it so he or she could brainwash the kids into thinking like her or him. If they had speakers I would make sure that for every one that was for it they would have one that was against it so the students would be able to make their own decision on whether it was something to believe in."

This is an opportune moment to reinforce with students the idea that the course is really an inquiry into the nature of nuclear weapons and that the teacher, too, is searching for solutions to the problems. Nuclear weapons are among the key controversial issues of our time. Why is it so hard to talk about controversy? Students may want to make a journal entry which centers around their questions and concerns, feelings and worries, as they embark on the study. This will be useful for them to reflect back on later in the unit.

Some teachers have found it useful to talk about why nuclear weapons education is avoided in most schools. Students respond with a variety of ideas:

--"It's so hard to think about what they mean -- it's really a discussion about death."

--"Maybe parents and teachers don't know very much so they don't know what to tell us."

--"Maybe adults try to protect us so we won't have to deal with the horror."

--"Maybe parents object to the way teachers are teaching it."

--"Maybe it's too hard to understand."

--"Maybe it's just a fad."

One student comments on why the unit should be taught:

"I have heard the argument that these things shouldn't be taught to children because it would destroy their childhood. By the time that we are in High School we should be drawn out of our microcosms and into the world. The experience as a teenager is that we notice the world and other people more and we have already begun to question. I no longer have a childhood to destroy -- childhood is programmed to self-destruct and mine has already begun to disintegrate. I've been worrying about some of our national policies for a while now, and I'm glad that the High School has begun to catch up with me."

Activity 2: Talking About Death

Consider this comment by a high school student after he had taken the course.

"I feel that everyone to ever take this course is not going to be totally happy about every discussion they have. I have to admit that some of the discussions we had got 'pretty heavy', and it was hard to handle! It's hard to spend 45 minutes a day talking about dying, and it's depressing! If I were to teach or tell about this course, I would give a certain amount of leeway to the student, give them time to be a little depressed, it's natural, and I would be expecting it. If a student were to come to me, and talk about dying with total smiles, I would really wonder what was wrong with that person, and their values."

Connections:

One of the reasons people find discussing nuclear weapons so difficult is that it requires the speaker to consider not only limitless, but abstract, death, but also his or her very own death. One of the recurring themes in interviews with young children and teenagers who are asked to respond to the word nuclear is death. As students consider the meaning of manipulation in the first activity, they may wish to consider how preying on fears of death is another form of manipulation, even when that fear is real.

Students may be interested in the results of a sample of 2,000 students queried in connection with a day-long symposium on nuclear issues. This questionnaire put out by Educators for Social Responsibility for its "Day of Dialogue" received responses from Massachusetts, Wisconsin, Oregon, and California. It showed that 87% of the students thought there would be a nuclear war in the next 20 years. Ninety percent felt that if a nuclear war occurred, the world would not survive. Eighty-one percent claimed that thoughts about nuclear war affected their job plans. Although only thirty-four percent asserted that the nuclear threat had an impact on their thinking about having a family or getting married, eighty-one percent also said it affected their hopes for the future. How does this sample compare to the concerns voiced by students in your school?

This is a possible time to talk about the despair that comes up when thinking about the nuclear world. Resources to do some work around this issue are available from: Interhelp, 330 Ellis Street #505, San Francisco, CA 94102.

A further source of information for teachers on children's fears and beliefs about nuclear weapons is a videotape, There's a Nuclear War Going on Inside Me, produced by Roberta Snow and Dr. Eric Chivian, available from this project. The segments document the developmental changes in children's thinking from the sense of helplessness and hopelessness of the third graders, to the graphic details of the fifth graders, to the anger and sense of absurdity of seventh graders, to the increased frustration, denial, or activism of the ninth graders.

Activity 3: Communication -- Squares Game

The activity you are about to do has a few simple rules. You will be divided into groups of five players. Each player will be given a sealed envelope with pieces of paper. All of the pieces of paper, when put together properly, will form five separate squares of equal size. The object of the game is for the team to put the paper together into the five squares. The task is not completed until everyone has a square. Here are the rules:

1. There is to be no talking!

2. No one may ask for, beg for, motion for, grab, or otherwise request or take a shape.

3. The only way pieces of paper may be passed from player to player is for one person to offer a shape to a player s/he believes can use it.

4. Do not open the envelope until your teacher gives the signal.

Connections

Communication and creative problem-solving are themes which are raised by this game and will recur consistently in this course. To begin the game, divide the class into groups of five and sit each group at a table with five envelopes containing pieces of the square. Describe the activity as a puzzle involving conflict and cooperation. The task is not completed until everyone in the group has a square. The directions for cutting up the squares and the solution to the problem are found on page 39.

The game itself can produce intense feelings on the part of many players. Do students talk or otherwise cheat? How do others feel about breaking the rules? How do they finally solve the problem? How do they feel during the play? What are the frustrations? How do they feel when someone holds a piece and does not see the solution? What was their reaction when someone finished a square and sat back without seeing whether his solution prevented others from solving the problem? How did they feel about having to break up one of their own finished squares? What rules of the game made achieving the goal so difficult? Why?

This game has been useful in stimulating discussion about many issues. Of paramount importance is the problem of communication and what happens to a group when communication is inhibited. Another consideration relates to creative problem-solving. In order for the group to fulfill the goal, the players need to drop the mental set that there is a winner or loser in the group and develop a mode of cooperation -- all without communication.

In response to how students felt about not talking, the class can discuss how people feel when they are not heard, when their point of view is not considered. What happens in a discussion when someone wants to win an argument? A critical component of this course is that the classroom be seen as a place where honest communication is possible and opinions are validated, a place where students do not compete to give the best or the right answer. Now is the time to begin to make the classroom work as a medium for communication.

Comments:

The following were comments from student journals of one ninth grade class which played the game at the beginning of the term:

"The game we played in class today showed...you have to create a way of making someone know your needs."

"Playing the game, I felt sort of guilty because I finished my square right away and there was no way for me to help the other members of my group."

"Interestingly enough, it appears that the group who finished last were actually the 'winners'; in other words, they followed the rules, did not cheat (worked together) in building their 'society'."

"I get frustrated because it was hard for me to get or give what I need. My frustration leads to anger and I feel like killing."

"I felt that the game had nothing to do with this course, because it just seemed like a dumb game to test our intelligence."

"I was awkward because I did not know most of the people with which I was playing. I did not know what they expected of me or what I should expect from them. But by the end of the game, I had learned a lot about everyone around me. Though I don't know what I learned about society during the game."

"I'd say the game was frustrating and drove me to cheating which is no innate quality of mine."

Activity 4: Establishing Dialogue

During the summer of 1982, a number of college students, graduate students, and teachers took a course on nuclear weapons and nuclear war, much like the one you are taking. The following interchange occurred between a guest speaker and one of the students:

Guest speaker: It's not "them" that's doing it. It's us. We pay the taxes. They're our weapons. They're our missiles. The Russian people don't live in a democracy, so we who do have an even greater responsibility to stop this madness.

First Student (sitting on the couch): It's wrong to say we have an added responsibility. The people we're worried about (the Russians) are the most aggressive people on earth.

Speaker: Even if that were true, we're committing suicide with our weapons.

Student: You can't use a moral argument with people who are immoral.

Speaker: Where did you get the idea that the Russians won't freeze or agree to on-site inspection? We've made 17 treaties with them with no violations. They show "The War Game" (a horrifying movie about nuclear war) on TV to their people. Our Pershings will only be six minutes from the Russian border.

Student: I'm worried about the Russians.

Speaker: You think like a disembodied cortex. Don't you read the papers?

Another Student: When I hear 'the couch' talk like that, it makes me wonder if we'll ever survive.

Connections:

Students may want to analyze what happened during the discussion. Did the three people listen to each other? What did they say to each other? What is significant about the phrases "disembodied cortex" and "the couch"? How might each person have felt during the exchange? Was this a discussion or an argument? What other responses might have been used by each person to improve the discussion? Do students ever find themselves in this type of exchange? How do they react? Why might people react like that?

Activity 5: Who has the Right Answers?

A film -- "Is it Always Right to Be Right?"

Connections:

This eight-minute "parable", narrated by Orson Welles, highlights centers of divisiveness in our society -- generation gaps, war, poverty, and race. It introduces the notion that it takes courage to admit that one is unsure or may be wrong. Because the search for truth is neverending, placing blame for a problem on another group is only a stop-gap method of solving the problem.

Among the many discussion questions suggested by the film, the following are relevant to this course: Have you ever heard, or yourself expressed any of the ideas presented in this film? How did the people who disagreed express themselves? How do you feel and act when you talk with people whose views differ radically from yours? How do you think people feel in such situations? What are some useful "do's" and "don'ts" to change an argument into a discussion? Why is it hard for people to say "I may be wrong"?

Activity 6: Argument or Discussion

Arguments	Discussion
Loud, angry, harsh tone of voice	Quiet, calm, even tone of voice
Interrupting	Letting the other person finish a point before you start to speak.
Changing the subject, using phony issues	Sticking to each point until you've worked through it.
Insults, put-downs, sarcasms.	Treating the other person with respect and friendliness.
Exaggeration (terrible, evil, never, everybody, always)	Using careful, exact words.
Pushy or threatening body language	Using calm face and hand motions.
Talking fast, rushing	Taking time
Thinking only of your next point instead of listening to the other person's idea	Listening carefully and seriously considering the other's views.
Faking it if you don't know something, never admitting the other peson has a good point	Saying "I don't know" if you don't. Agreeing with the other person's good points.

Arguments	Discussion
The goal is to win	The goal is to find the truth.
Playing the victim to make the other person feel guilty.	Being clear and assertive about the situation.
Mind reading, telling the other person what s/he thinks or feels.	Asking the other person how s/he feels.

Connections:

This list may be used to supplement the student's own suggestions made during previous activities. It may be helpful to them to role-play a variety of conflict situations using several of the suggested techniques so that they begin to develop a sense of how to express themselves more positively and to listen more supportively.

Journal entries about how they feel in regular class discussions which shift from argument to discussion (or vice versa) may be attempted so that at various points in the curriculum, this lesson is repeated. They may alternate between "discussing" and "arguing" a given topic; or may try to analyze which rules for discussing are hardest to keep. Whatever the classroom strategy, it is hoped that students will gain an appreciation for their own and others' feelings in arguments and learn constructive techniques for discussions.

Comments:

"It seems to me that when we are involved in a cause such as nuclear disarmament, those opposing us like to call us over-emotional and irrational. Such insults are embarrassing and sometimes sobering. We know we are listening to our emotions in part, and we wonder if that is wrong."

"In a regular history class last week, my teacher and I became involved in an argument about nuclear weapons; I arguing for disarmament, and he against. Using words like leftist, and apocalyptic, he embarassed me. I was angry, though not at him. My anger was directed, for the most part, at my classmates who remained virtually silent throughout the forty minute argument. I knew that many of them had strong opinions about the issue, but were either too afraid, passive, or embarassed to voice them."

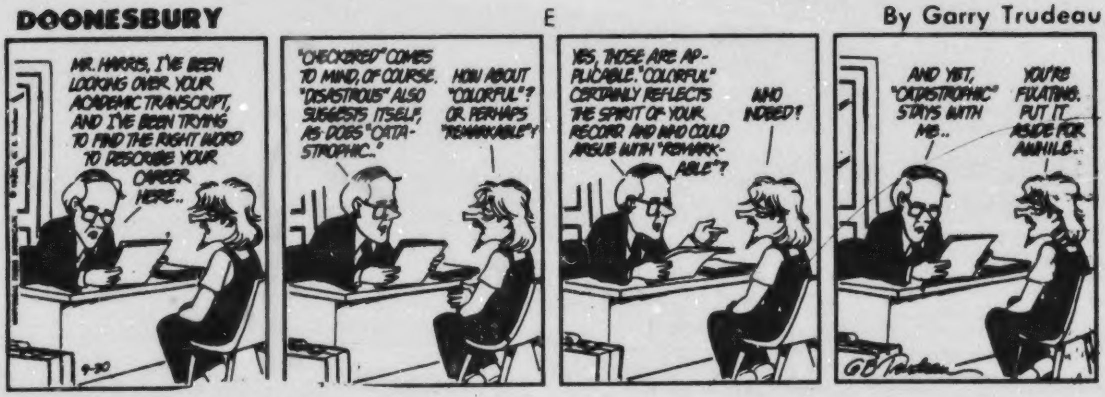
"I realized one must not be afraid of one's emotions in issues such as this. Concerning life and death, one follows one's emotions regardless. If our lives are in real danger, there is no choice but to find the fastest way to safety. This is even more true when not only our individual life is at stake, but the life of our species. All the rationality in the world cannot override emotion in this issue."

"This course taught me to feel anger at passivity. At least if someone is willing to argue you can grow. But if we keep it inside and tell ourselves our way of thinking is right, we'll stay stuck in this direction moving toward nuclear catastrophe. We have to become involved with each other."

-- journal entry of a 10th grade student

Activity 7: Language and Propaganda

What do words mean? How are they used by different people for different purposes? Consider Doonesbury:


DOONESBURY
E
By Garry Trudeau
MR. HARRIS, I'VE BEEN LOOKING OVER YOUR ACADEMIC TRANSCRIPT, AND I'VE BEEN TRYING TO FIND THE RIGHT WORD TO DESCRIBE YOUR CAREER HERE..
9-30
"CHECKERED" COMES TO MIND, OF COURSE. "DISASTROUS" ALSO SUGGESTS ITSELF, AS DOES "CATASTROPHIC.."
HOW ABOUT "COLORFUL"? OR PERHAPS "REMARKABLE"?
YES, THOSE ARE APPLICABLE. "COLORFUL" CERTAINLY REFLECTS THE SPIRIT OF YOUR RECORD AND WHO COULD ARGUE WITH "REMARKABLE"?
WHO INDEED?
AND YET, "CATASTROPHIC" STAYS WITH ME..
YOU'RE FIXATING. PUT IT ASIDE FOR AWHILE..
GB Trudeau

Connections:

When scholars discuss nuclear annihilation, they often say we need a new language to discuss the "unthinkable." We experience a failure of imagination when we try to depict the horrors we would certainly encounter in any nuclear exchange. Yet, language is used, and -- with the common words -- images are projected. Students need to become aware of how language influences their thinking. We suggest many exercises to help students understand the role of language in their everyday lives as well as in the nuclear debate. Teachers may choose to deal with the sections on statistics and weaponry in the unit which covers those two topics, rather than in this introductory section.

One goal of these activities is for students to develop a working definition of the word propaganda. They may collect examples of propaganda in advertising, political campaigns, public debtate on controversial issues like abortion, etc., for a collage or bulletin board.

Journal entries which describe students' experience with use of manipulative language, no matter when they occur in the course, are valuable.

Activity 8: Recognizing Propaganda

Language which rallies citizens around the rightness of their cause is called propaganda. Value-laden language can be an especially powerful weapon in propaganda. The following short exercises will help you see how you and others use language to elicit feelings.

1. Hot Words and Cool Words can describe the same behavior, but produce an emotional (hot) or neutral (cold) response.

Behavior: Wilma moves around when she talks.

Critical words -- Wilma is hyper.

Insulting words -- Wilma is schizzy and a twitch.

Praising words -- Wilma is energetic.

How do these words produce a hot or cold reaction? Try to write hot words for the following behaviors:

a. Behavior: Lee is 5'8", weighs 100 pounds.

b. Behavior: Gene leaves clothes on the bathroom floor for weeks.

2. Some words are euphemisms, pleasant words substituted for offensive ones. Consider the following examples and try to explain why they are euphemisms.

a. In day to day conversation we say:
passed away
restroom
underachiever

b. In a war we say:
relocation
protective reaction strikes
resources control program
interdiction (bombing)
new life hamlet (refugee camp)

c. In avoiding a criminal prosecution for wrong doing, we say:
inappropriate act
electronic surveillance
statement no longer operative

3. Just as euphemisms cloud meaning, so do exaggerations. These words don't label PEOPLE but they are vivid images of aspects of the nuclear arms issue. What does each mean and how might it be an exaggeration?

Phrase	Meaning of Phrase	What Might Be Exaggerated?
1. Holocaust		
2. Window of Vulnerability		
3. Domino Theory		
4. Extinction of the Species		
5. Doomsday Clock		
6. Free World		
7. Missile Gap		
8. Armageddon		

4. In order to dehumanize an enemy, people often use name-calling to teach people to hate. Many of these names are categorized as racist names. Some examples are:

"Gooks"

"Slants"

"Communists"

"Commies"

"Infiltrators"

"Charlie"

"Ruskies"

The "Turks"

The "Huns"

"Redskins"

"Rebels"

"Guerillas"

What kind of connotations do these words have? If they are racist terms, how do they describe the groups in question?

5. People use inflammatory words in the nuclear arms debate to describe their opponents. Half these words describe people who support increasing nuclear weapons for national security and half describe those who support decreasing nuclear weapons for national security. Group the words under each of the headings: people supporting increase, people supporting decrease. Use the dictionary if you need to.

alarmist
militarist
idealist
dove
hawk
warmonger
Nazis
emotionalist
anti-American
Fascist
utopian
peacenik
right winger
triggerhappy
soft on communism
military-industrial complex
reactionary
diehard liberal

What is the effect of using a word like "triggerhappy" to describe a person's position?

6. The automobile industry chooses words like "cougar" to name its cars, because such words suggest speed, a touch of danger, or excitement. Use a dictionary to look up each of these names for U.S. missiles. What does each word mean? What does each meaning suggest? Then make a generalization about why you think these words were chosen to be the names of missiles.

Name of Missile	Dictionary Meaning	Suggested Meaning
a. Pershing		
b. Lance		
c. Titan		
d. Minuteman		
e. Cruise		
f. Trident		
g. Stealth		
h. Polaris		

7. Government officials use certain words to describe some aspects of the U.S. nuclear arms strategy. What does each phrase suggest to you? What is the more direct and simple way to say the same thing? Why do you think these words are used instead of the simpler ones? Are they euphemisms?

Words	Suggested Meaning	Most Direct Way to Say It
a. nuclear device		
b. soft target		
c. nuclear event		
d. pre-emptive strike		
e. European theater		
f. nuclear deterrence capability		
g. nuclear exchange		
h. limited nuclear war		

8. Write about an imaginery, controversial event at school as it might be reported from two different points of view. Possible events: a teacher strike, a student suspension, a campaign to improve cafeteria food. Do not alter the facts, only use different language, such as hot words, euphemisms, etc.

9. Choose an article from the newspaper on a controversial issue. Rewrite a paragraph of it from another point of view.

10. Given that language can be used to manipulate our emotions and that often we cannot investigate a controversial situation personally, how do we know whom to believe? Ask students to draw up a list of questions that would help in decising whether or not they should trust a particular reporter, columnist, politician, or anyone else giving their version of "the truth." Some suggestions:

--Does this person rely heavily on euphemism or emotional language? What does the language used tell about his/her point of view?

--What are his/her sources of information? Is he or she writing from first-hand experience?

--Who is paying this person? Is s/he under pressure from employers to report events in a certain way?

--Does he or she have any personal stake in this issue?

--What are this person's biases or prejudices?

--Has any relevant information been withheld by the writer or speaker?

11. Save the list of criteria generated in number 10 to use when you read or hear different perspectives in this curriculum.

12. One of the most obvious forms of propaganda is the visual dehumanization of the enemy. Look at the following political cartoon of Tojo. What is the disfigurement of his body meant to tell the viewer? How would a drawing like this be effectively used in time of war?

13. Writers often use numbers in a particular way to bolster their argument. How do the following examples use numbers in a misleading way? In each example, consider what other information you need to understand the statement.

a. A teacher tells a class what a bad job they did on a test where the average score was only 69. Why might the "average" be unfair grounds for criticizing the class?

b. More people were killed in airplanes last year than were killed in airplanes in 1910. Was it safer to fly in 1910?

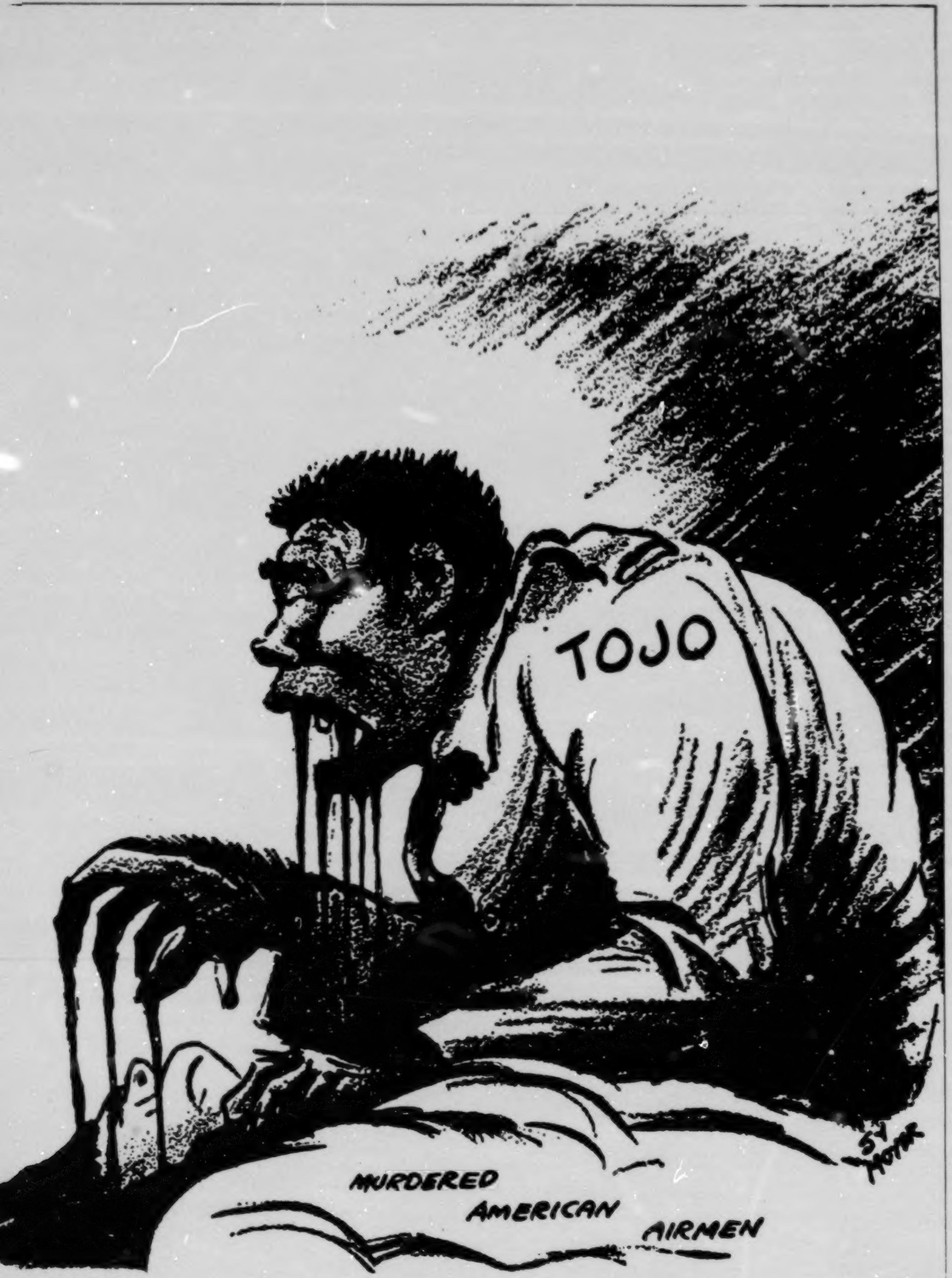
Your explanation:

c. Boston, MA and Berkeley, CA have the same average temperature. Does this mean that if you visit Berkely from Boston you can take along the same clothes you usually wear at home?

Your explanation:

d. The number of reported rapes in the U.S. is very high compared to a few years ago. A speaker concludes that the problem clearly is getting worse and none of the steps that have been taken against rape have worked. What other explanation is possible for the increase in reported rapes?

e. A Boston politician said "The silent majority is against busing for intergration." Her proof was a questionnaire sent out to 200,000 people. Eighty percent of the 23,000 people who responded wrote that they were against busing for integration. Is her statement backed up by her proof? Your explanation:


TOJO
MURDERED AMERICAN AIRMEN
SY MOYER

BEST COPY AVAILABLE

f. In 1941, the U.S. had not yet entered the war against Germany and Italy (World War II). A poll asked Americans if they favored the U.S. entering the war against Germany and Italy, and 29 percent said they favored American entry. A similar sample was asked the same question but was also given several other alternative actions to choose from, such as the U.S. supplying our ally (Britain) with war material. Only six percent favored entering the war against Germany and Italy this time. How do you explain the difference? What is the people's true opinion? What questions do you need to ask about the poll to know how relevant the statistics are? Your explanation:

g. President Reagan announced that his administration had appointed 314 women to high-ranking federal positions, compared to only 289 by President Carter. But the National Women's Political Caucus disputed his claim, pointing to Reagan's 52 Cabinet-level or sub-Cabinet level women appointees compared to Carter's 65. What is the significant difference in the two sets of numbers? Your explanation:

Activity 9:

"Defense Talk"
by Stephen G. Perrin
reprinted from the Boston Globe

The Joint Chiefs of Staff have issued a "Dictionary of Military and Associated Terms" for the Department of Defense. An odd assortment of words and phrases, it sprinkles innocent photographic terms among those pertaining to aerial combat, minefields and nuclear warfare. As expected, it contains some doubletalk, as in defining a preventive war as "a war initiated in the belief that military conflict, while not imminent, is inevitable, and that to delay would involve greater risk."

I was particularly interested in the terms relating to nuclear war, since that is an area in which my own vocabulary is notably weak. I discovered, for instance, that contingent effects are "effects, both desirable and undesirable, which are in addition to the primary effects associated with a nuclear detonation." I had trouble imagining what the "desirable" effects might be.

As for degree of risk (nuclear), that refers to "the risk to which friendly forces may be subjected from the effects of the detonation of a nuclear weapon used in the attack of a closed-in enemy target." Certainly any nation detonating a nuclear weapon is going to be hard up for friends.

Then there is gross error, "a nuclear weapon detonation at such a distance from the desired ground zero as to cause no nuclear damage to the target." In such cases, since the target refuses to move under the detonation, somebody else must take delivery of several megatons of something they didn't even order. They probably would agree about the grossness of the error.

Moving through the alphabet, just hitting the high points, we come across median lethal dose, "the amount of radiation over the whole body that would be fatal to 50 percent of the exposed personnel in a given period of time. There's not much point asking about the other 50 percent, the luckless ones.

That kind of thinking leads us into the notion of moderate risk (nuclear), a term for "a degree of risk where anticipated effects are tolerable, or at worst, a minor nuisance." It's hard to grasp the idea of such effects being a "minor nuisance." To whom?

Only halfway through the alphabet, it becomes clear that this is a dictionary for disaffected people who adopt a cavalier attitude toward their race and other unfortunate creatures. They must have been born in a bunker and never left home. They are probably the same guys who make the nuclear damage assessment, "the determination of the damage effect to the population, forces and resources resulting from actual nuclear attack."

Connections:

This editorial provides students with an opportunity to look more closely at euphemisms as they are used in a discussion of nuclear weapons and war. The students may try to create a non-euphemistic term for each of the terms. Since Mr. Perrin uses sarcasm as a technique in his piece, students may wish to examine why the writer chose humor as a rhetorical device; and how humor affects the piece and also serves as a method of influencing the reader.

Activity 10: Where do we get our information?

The words we use present a biased view of a situation. But the information itself, when seen from a certain point of view, may not be complete or accurate. Take for example the following news report about school textbooks.

"U.S. and Soviets Critique each Other's Textbooks"
(adapted from the Boston Globe)

The United States and the Soviet Union began a study of each other's high school textbooks in 1977. Their critiques can be distilled into the following summary:

--The Soviets say US texts teach "insidious fabrications of renegades of all stripes in order to discredit the USSR."

--Russian texts teach "life in the United States is characterized by decadence, alienation, poverty and misery," according to Americans.

Analysis by teams from each side were published yesterday in the April issue of Social Education, the journal of the National Council for the Social Studies.

Soviet textbooks are colored by the "ideological bias" of Marxist-Leninist theory, as shown by a description of the American Revolutionary War as "a bitter class struggle"...

...Soviet textbooks are "remarkably free of factual errors," with some notable exceptions. One was an account of the 1962 Cuban missile crisis that said "American imperialists...pushed the world to the brink of thermonuclear war."

Soviet texts say American blacks, Indians and other minorities "suffer from extreme forms of persecution. Despite the material wealth enjoyed by many Americans, life in the United States is characterized by decadence, alienation, poverty and misery."

On the other hand, Soviet reviewers...contest US textbooks "do everything in their power to discredit the existing political system in the Soviet Union and to undercut the enormous achievements of the first socialist state in the world.

Connections:

The most common question in groups discussing nuclear arms control is "But what about the Russians?" Students should begin to consider why that question occurs so prominently. What do they know about the Soviet Union? Where do they get their information? How much factual information do they really have? How does their information affect their thinking about the Soviet Union? The readings which follow are further examples of how difficult it is to find accurate information.

Activity 11:

"The Propaganda Man" by Lewis H. Lapham
(adapted from the Boston Globe, July 4, 1982)

How do you tell the people of one country what's going on in another? If you're the U.S. correspondent of the Soviet newspaper Izvestia, the answer is fairly simple: You rearrange the news to suit your own purposes.

That's what 53-year-old Melor Sturua does. He's Izvestia's senior correspondent in Washington and as such has the job of keeping at least eight million Russian readers advised of what's happening in the U.S. To define what he writes, he uses the term propaganda with no compunctions.

"For propaganda to succeed," he said over lunch at an expensive Washington restaurant, "the fact itself must be true. If the fact is true, then it is possible to believe the interpretation."

Interpreting the facts, Soviet reporters in the U.S. depict this country pretty much as a lawless frontier. In the "crazy America" they write about, criminals roam the streets, unemployed workers stand in breadlines, pimps and pornographers work in broad daylight, and the nation's youth squanders its life in an orgy of drugs. Except for the ruling elite, nobody is safe or happy.

To draw this portrait, Soviet reporters like Sturua need only selectively arrange news published in the American press. They play up statistics like 9 million unemployed, 2 million illegal guns in New York. They dote on the corruption indicated by the Abscam trials. They emphasize sensational crime stories.

Says Sturua: "Our cliches are based on your cliches. We print what you write about yourself."

The Izvestia correspondent takes particular pride in a dispatch he sent his paper last Christmas. He juxtaposed passages from the Neiman-Marcus department store catalog against instances of poverty culled from the New York Times' annual 100 Neediest Cases Appeal. "Any commentary would have been superfluous," he said.

Robert G. Kaiser, former chief Moscow correspondent for the Washington Post, regards Sturua as more adroit and humorous than most of his Soviet colleagues. "You must remember," he says, "that the Soviets think of journalism as a weapon in the ideological struggle. To compare Russian and American journalism would be to compare apples and oranges."

When Marilyn Monroe died, Sturua portrayed her as a victim of the capitalistic exploitation, too sensitive to survive in "the jungles of American life." According to his paper, Elvis Presley, Natalie Wood and John Belushi all were robbed of their humanity by the pitiless greed of their capitalist owners.

"We show that you pay a very heavy price for the success of your consumer society," Sturua says.

With the election of Ronald Reagan, the Soviet media revived the image of the rapacious American plutocrat, and Izvestia has been publishing cartoons of a swaggering figure carrying machine guns into El Salvador and cruise missiles into Europe. The accompanying texts suggest that the U.S. government is being run by fanatic millionaires who would blow up the world on a moment's notice.

Sturua believes that this portrait contains a good deal of truth. He takes only a passing interest in the more benign aspects of American life. The luxury of an expensive restaurant, or the charm of the safer suburbs around Washington, fails to impress him. He chooses to see "the not-so-pretty-things" -- recession, unemployment, crime, the arms race -- supporting his observations with "the official facts."

"It isn't a question of how much a man can afford to indulge in the sweet life," Sturua says. "If a man judges a country by the quality of its entertainment, then he is a very poor man."

When his own country is criticized, Sturua relies on a historical defense. The Soviet Union is a new society, he says, still struggling against the dark elements in human nature. He describes the alcoholism and tendencies toward anarchy and graft as "birth defects" inherited from the czarist past.

"No society is duty-free," he says. "At the airport, yes; on earth, no."

His depiction of the U.S., Sturua believes, is as objective as the portrait of the USSR presented by the American press. At least he distinguishes between the components of American power (the Congress, the media, the President, the labor unions, the courts, etc.), he says, whereas American papers invariably portray the Soviet Union as a monolith. By giving so much attention to the dissident Soviet intellectuals, Sturua maintains, the American press falsely magnifies the importance of "an infinitesimal minority."

It has occurred to him that if both countries were reduced to the simplicity of clichés, they would look like mirror images of one another. Against the caricatures of the American plutocrat and the worker, our press counters with the caricatures of the cruel Soviet comissar bent on world domination and the warm-hearted peasant sunk into a stupor of vodka and trapped in the maze of a police state.

"If in the U.S. press you see a Russian with a smile on his face," Sturua says, "it means that he is defecting."

As he considered the choice between a Napoleon and raspberries in cream, Sturua recalled a speech he made that week to a Kiwanis Club in Florida. Somebody asked if American tourists in the Soviet Union really could be shot on sight. Sturua remembered that in 1959, when first assigned to New York, he was advised not to go by his grandmother because he was sure to be killed by muggers.

Connections:

Of particular interest in "The Propaganda Man" are the concepts of point of view in choosing details to report. Do students think American reporting of the Soviet Union is fairer than Sturua's reporting of the U.S.A.? What is Mr. Lapham's point of view as a reporter? How does the detail of "raspberries in cream" show his point of view? How do students feel they have been duped or been duped by someone else? What happened? Such experiences may be recorded in journals.

Activity 11: Where do we get our information? (cont.)

1. The Education Ministry of the government of Japan ordered that the 1983 edition of Japanese history text books about World War II be changed. They were to call Japanese attacks on China and Korea "advances", not "aggression"; and they would not fully report what is commonly called "The Rape of Nanking." After vigorous protest from China and some Japanese citizens, the Education Ministry reversed its position.

2. On January 28, 1983, the Boston Globe reported that the surprise visit by President Reagan to the Eire Pub "unwittingly broke up an FBI stakeout inside the barroom." The following day, after the FBI denied the report, the Globe's editors conceded the story was wrong.

3. The January 15, 1983 edition of TV Guide published an article entitled "Nuclear War and TV: Are the Networks Playing Fair?" In part, their conclusions suggest television is to some extent responsible for frightening people about nuclear war. Even though the networks use generally sober language in their reporting, they use file footage of powerful blasts and serious destruction to illustrate the talk. The anchorman on one special featuring the fears of children implied the Administration's civil defense plans are a "cruel deception." "There is a fine line between prodding people into awareness," the article concludes, "and pushing them into paranoia or numbness, and on this issue the networks still seem to be searching for where it is."

Connections:

As students read these cases, they may wish to define how they determine what is correct. How, from all the contradictory information, do they finally pick what they think is correct? How does the contradictory information on nuclear weapons make discussion more difficult than argument on this issue?

Activity 12: Harmony and Friction at Robber's Cave

When groups of boys are thrown together under varying circumstances of harmony and friction, will their behavior reflect the changing situations? In the following account a social scientist describes an experiment intended to answer this question (abridged from "Experiments in Group Conflicts" by Muzafer Sharif, Scientific American, November, 1956; reprinted by AEP):

> We wanted to conduct our study with groups of the informal type...
>
> For this purpose we conceived that an isolated summer camp would make a good experimental setting, and that decision led us to choose as subjects boys about 11 or 12 years old who would find camping natural and fascinating.
>
> The boys chosen were of like kind and background: All were healthy, socially well-adjusted, somewhat above average in intelligence, and from stable, white, Protestant, middle-class homes.
>
> None of the boys was aware that he was part of an experiment on group relations. The investigators appeared as regular camp staff -- camp directors, counselors, and so on. The boys met one another for the first time in buses that ook them to a normal summer of camping.
>
> (The camp was conducted in 1954 in Oklahoma, near a famous hideaway of Jesse James called Robber's Cave. The two groups of boys at this camp named themselves the Rattlers and the Eagles.)
>
> When the two groups in the camp had developed group organization and spirit, we proceeded to the experimental studies of inter-group relations. The groups had had no previous encounters; indeed, in the camp at Robber's Cave, the two groups came in separate buses and were kept apart while each acquired a group feeling...
>
> In each group the boys pooled their efforts, organized duties, and divided up tasks in work and play. Different individuals assumed different responsibilities. One boy excelled in cooking. Another led in athletics. Others, though not outstanding in any one skill, could be counted on to pitch in and do their level best in anything the group attempted. One or two seemed to disrupt activities, to tease at the wrong moment...

A few boys consistently had good suggestions and showed ability to coordinate the efforts of others in carrying them through. Within a few days, one person had proved himself more resourceful and skillful than the rest. Thus, rather quickly, a leader and lieutenants emerged. Some boys sifted toward the bottom of the heap, while others jockeyed for higher positions.

Each group developed its own jargon, special jokes, secrets, and special ways of performing tasks.

Wayward members who failed to do things "right" or who did not contribute their bit to the common effort found themselves receiving the "silent treatment," ridicule, or even threats. Each group selected symbols and a name, and they had these put on their caps and T-shirts.

Our working hypothesis was that when two groups have conflicting aims -- i.e., when one can achieve its ends only at the expense of the other -- their members will become hostile to each other even though the groups are composed of normal well-adjusted individuals.

To produce friction between the groups of boys we arranged a tournament of games: baseball, touch football, a tug-of-war, a treasure hunt, and so on. The tournament started in a spirit of good sportsmanship. But as it progressed good feeling soon evaporated. The members of each group began to call their rivals "stinkers," "sneaks," and "cheats."

A large proportion of the boys in each group gave negative ratings (in a questionnaire) to all the boys in the other. The rival groups made threatening posters and planned raids, collecting secret hoards of green apples for ammunition.

In the Robber's Camp cave, the Eagles, after a defeat in a tournament game, burned a banner left behind by the Rattlers; the next morning the Rattlers seized the Eagles' flag when they arrived on the athletic field. From that time on name-calling, scuffles, and raids were the rule of the day.

Within each group, of course, solidarity increased. There were changes: One group deposed its leader because he could not "take it" in the contests with the adversary; another group overnight made something of a hero of a big boy who had previously been regarded as a bully. But morale and cooperativeness within the group became stronger. It is noteworthy that this heightening of cooperativeness and generally democratic behavior did not carry over to the group's relations with other groups.

We now turned to the other side of the problem: How can two groups in conflict be brought into harmony? We first undertook to test the theory that pleasant social contacts between members of conflicting groups will reduce friction between them.

We brought the hostile Rattlers and Eagles together for social events; going to the movies, eating in the same dining room, and so on. But far from reducing conflict, these situations only served as opportunities for the rival groups to berate and attack each other.

In the dining hall line, they shoved each other aside, and the group that lost the contest for the head of the line shouted "Ladies first!" at the winner. They threw paper, food, and vile names at each other at the tables. An Eagle bumped by a Rattler was admonished by his fellow Eagles to brush "the dirt" off his clothes.

Just as competition generates friction, working in a common endeavor should promote harmony. It seemed to us...that where harmony between groups is established, the most decisive factor is the existence of "superordinate" overriding goals that have a compelling appeal for both but which neither could achieve without the other. To test this hypothesis experimentally, we created a series of urgent, and natural, situations that challenged our boys.

One was a breakdown in the water supply. Water came to our camp in pipes from a tank about a mile away. We arranged to interrupt it and then called the boys together to inform them of the crisis. Both groups promptly volunteered to search the water line for trouble. They worked together harmoniously, and before the end of the afternoon they had located and corrected the difficulty.

A similar opportunity offered itself when the boys requested a movie. We told them the camp could not afford to rent one. The two groups then got together, figured out how much each group would have to contribute, chose the film by a vote, and enjoyed the showing together.

One day the two groups went on an outing at a lake some distance away. A large truck was to go to town for food. But when everyone was hungry and ready to eat, it developed that the truck would not start (we had taken care of that). The boys got a rope -- the same rope they had used in their acrimonious tug-of-war -- and all pulled together to start the truck.

These joint efforts did not immediately dispel hostility. At first the groups returned to the old bickering and name-calling as soon as the job in hand was finished. But gradually the series of cooperative acts reduced friction and conflict. The members of the two groups began to feel more friendly to each other...

In the end the groups were actively seeking opportunities to mingle, to entertain and "treat" each other...

Our interview with the boys confirmed this change. From choosing their "best friends" almost exclusively in their own groups, many of them shifted to listing boys in the other group as best friends. They were glad to have a second chance to rate boys in the other group, some of them remarking that they had changed their minds since the first rating made after the tournament. Indeed they had. The new ratings were largely favorable.

Connections:

The Robber's Cave experiment has been chosen as the final activity for this section because it links together issues of manipulation, fear, dehumanization, propaganda and difficulty in establishing dialogue. Students may wish to list all the issues they have considered which make it hard for them to think about an issue. How are these problems evident in the Robber's Cave case? How were the researchers conditioned by information? That is, what assumptions did they make about race and sex? When we are "programmed" to see, hear, think, and behave in a particular way, how difficult is it to break out of that mold? Was it possible for the boys to "see" each other differently? How do we know if we are being manipulated? How do students feel about this experiment?

Students sometimes feel angry reading Robber's Cave. They feel the experiment itself was unfairly manipulative and worry about their being part of such activities. A journal entry on this topic may be beneficial to students. Experimentation is a theme which appears in "The Flying Machine" (a short story in the section "Constructing a Value System") and in discussing Hiroshima. Students may appreciate being able to refer back to this reading.

Some classes may be interested in performing mental-set exercises which underline how easily people are trapped into a set way of thinking. The following mental set exercises are given in a certain order from abstract to political. Use whichever seem appropriate to your class. Although students may see some as tricks, it is important that the objective not be lost: that we see and think within a certain framework.

1. Introductory game: This is designed to set the class off balance, to help them note their frustration and anger, and to help them understand that people, when confused, often become defensive. For instance, you might bring a ball to class, set up a game, change the rules midway, and then suddenly have the class sit down, be forced into silence, and take a test on yesterday's homework. When they become angry at the idea of rules being changed and of being tested, begin the discussion.

2. Frameworks of perception are not optical illusions; rather, what we see depends on the framework given. What we see often depends on the environment in which the object is placed.

    a. On a card, present ∠aoc [Fig.1]. Is it acute, right or obtuse? Add a second card [Fig.2] and ask the same question. Now show ∠aoc in the context of a cube [Fig.3]. It can not be called a right ∠.

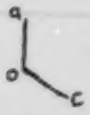


Fig. 1

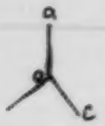


Fig. 2

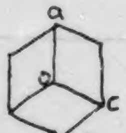
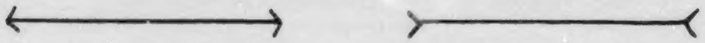


Fig. 3

b. Which horizontal line is longer?



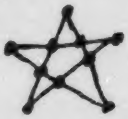
c. Why did early man think the sun rose and set?

d. Using common objects of the same weight, ask a student to hold one in one hand and two in the other. Can he or she tell which hand has more weight? Now hold 19 of the same object in one hand and 20 objects in the other. Can s/he tell now which is heavier? This kind of immunity to change is called adaptation level; when the amount is larger, distinguishing differences is more difficult. An example is becoming immune to violence; one fight may shock us, but the tenth may not bother us.

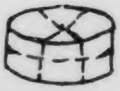
3. Cognitive Sets and Thinking: What you think as well as what you perceive is often influenced by a framework, mental framework in this case.

   a. Read this problem to the class: Six men enter an elevator on the first floor going up. On the second floor, two get off and three enter. On the fourth floor, three leave and one enters. On the fifth, two get on and two get off. How many got on on the second floor? This question is hard because the problem isn't posed in advance and it's difficult to know in advance what material will be important to remember.

   b. Ask the class to arrange ten trees in five rows with four trees in each row. This is difficult because our normal "mental set" is to draw rows as columns.



   c. Tell the class to draw a circle to represent a cake. Find a way to cut the cake into eight equal pieces, using only three slices. This is hard because of the reluctance to add the third dimension and to make a horizontal slice.



4. Complex political attitudes are also influenced by frameworks and mental set influence.

   a. On index cards, reproduce the statement: "I believe that a revolution is as good for a country as washing your face is good for your complexion." On half the cards, sign the statement George Washington; sign the rest of them Joseph Stalin, leader of the Soviet Union. Hand them out to opposite sides of the class and ask them to read the statement, think about the meaning, and write their opinions of it. After about five minutes, ask who agreed, by a show of hands. In a subsequent discussion, class hopefully will realize that the meaning and the worth of the statement sometimes depends on the source. We tend to believe those the culture respects.

b. Hand our the public opinion questionnaire (found on p. 39), and have students fill it out. Then have them take home additional copies to be filled out by parents or other adults. Hand all from each family in together. Tabulate to what extent the answers within any one family agree. Here, the issue is that, in things which don't affect you directly and with which you've had little personal experience or study, it's common to accept others' opinions. Chances are, there would be far greater discrepancies in a poll on personal behavior. In politics, we tend to accept the opinion of the government we judge to be more knowledgeable.

No matter which mental-set exercises are included, it is important that students engage in a summarizing discussion. Why do students think these questions and readings have been used to introduce a course on nuclear weapons and nuclear war? Do students believe learning to have sensitive dialogue and understanding propaganda is all that is needed to resolve the nuclear weapons problem? What else do they think they need to know?

Comments:

"I went into this class planning not to allow it to change my thinking towards the arms race and military spending. However, to my disappointment, at the end of the class I have to admit to a degree it has been effective. My point of view of staunch need for arms has changed to a wishy-washy feeling, and it took a while for me to clear my mind of the thoughts they had put in it.

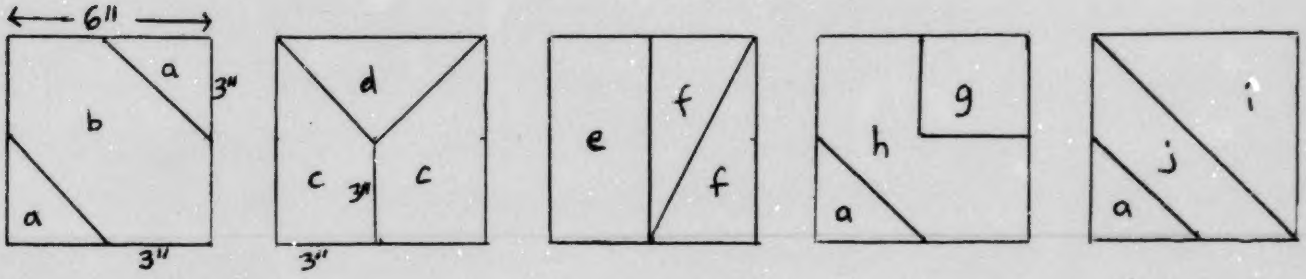
"If I could change easily it makes me realize how I got my ideas to begin with. Just think of all the subtle ways we learn to think how we think. So maybe wishy-washy is excellent because it means you're open to questioning the information. As long as you don't use it as an excuse to hide from doing something, I think it's probably an O.K. place to be."

--journal entry, a high school student

PUBLIC OPINION QUESTIONNAIRE

	YES	NO
1. Do you think that President Reagan is doing everything he can to halt inflation?		
2. Do you think the United States should send some troops to El Salvador to help the Salvadoran army?		
3. Should men who resist the draft be given the maximum penalty under law?		
4. Do you think the Soviet government is respected by the citizens of the Soviet Union?		
5. Do you think Americans should have used an atomic bomb on Hiroshima?		
6. Do you think that the United States should continue to test the space shuttle?		
7. Should mothers be allowed to collect welfare without working even if they have the skill to hold a job?		

Squares Game Schema

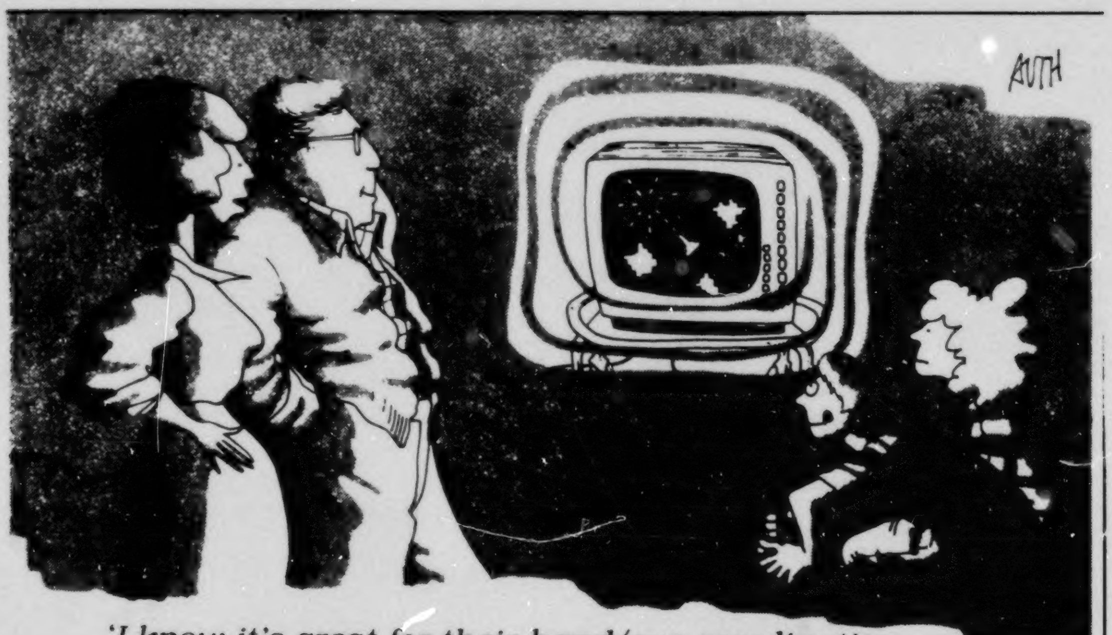


Each 6" square is made up of three pieces, each with one 3" side. Mix up pieces so that the envelope each student receives at the start contains pieces from several squares. Make as many sets of five squares as you need for your class.

CHAPTER III:

ON VIOLENCE

Activity 1: A cartoon



'I know it's great for their hand/eye coordination . . . it's their brain/reality coordination that bothers me . . .'

Connections:

Ask students to brainstorm all the causes of violence they can think of. In producing their list, they may begin to note the symbiotic relationship between expressions of violence and new violence. As they explore the cartoon by Auth, they may wonder if an innocent game is a cause of or an outlet for aggression. How are aggression and the desire to win connected, if at all? Is there any connection between perceiving a victim as a distant, or mechanical dot, and a tendency to dismiss the human aspects of violence? A journal entry in which students explore what makes them personally act in more or less violent

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ways provides a personal association to the subject. Students may wish to refer to the Squares Game and communications exercises on p. 39.

Comments: (from a class discussion)

--"Did you notice how all the boys played with guns and think they're okay?"

--"It's hard to believe what he (the cartoonist) is trying to say."

--"You know it's hard for us to stick to the subject. Do you think we really get a kick out of killing?"

--"I know the difference between a game and reality."

--"I think girls understand something totally different about violence and the causes then boys do."

--"I feel so keyed up after playing a video game maybe it creates aggression."

Activity 2: A film -- "Toys"

This short film concerns a child's fantasies when s/he plays with war toys in a department store display.

Connections:

Many students have been entranced by the photography. "How did they get those toys to move?" is a frequent question. Asking students to reflect on their own reactions to the war toys -- did they find themselves wrapped up in the adventure? -- may become the springboard for the discussion. Students watching this film have also expressed other concerns, especially around whether children can tell the difference between fantasy and reality when they play with war toys. In discussing this issue, students may find it useful to think about the signals the culture sends us, such as from sports, superheroes, politics, ads, etc. It might be interesting to note in lower grade classrooms, when children are asked to draw pictures of war, boys offer vivid pictures of material, while girls draw ambulances, stretchers, etc. Is this split evident in their class? How might students find out if such a sex-defined division is generally true? Why might this have occurred?

Activity 3:

A slide tape -- "Man Against Man: A Study of Aggression and Conflict"

Connections:

Numerous visual media have been produced on the nature of violence. An anthropological and historical approach is developed by "Man Against Man: A Study of Aggression and Conflict" (Pt. I). As students explore what the slide tape means by "aggression being culturally determined," they may wish to list the symbols of competition and aggression they see in their culture as opposed to symbols of peace and cooperation. The text suggests that both aggressive competition and creativity spring from the same source -- energy. What does the class see as basic human drives?

Students may continue their discussion of this filmstrip with some self analysis. When have they ever been angry enough to be violent? What sorts of situations have provoked anger and/or violence in them? What do they think causes larger acts of violence, such as gang fights or even wars? Do they think the motives behind personal violence are the same as those behind war? What might some of the differences be?

A theme which has been raised before and bears reconsideration is that of blocks to communication, by word use, attacking statements, etc. To what extent does the use of such blocks produce aggressive and/or violent responses?

Activity 4 :

A film -- "Obedience"

"I was just obeying orders," has been in history the response of people charged with committing heinous crimes during their work situation. Are these people monsters, or simply ordinary men and women who, in certain contexts, have been taught to obey?

Connections:

We examined in a previous section how we learn what is true or correct information. Our values, as suggested by "Man Against Man: A Study of Aggression and Conflict," can also be taught to us. How are we taught to obey? How do we become so much a part of the culture that we respond unwittingly to its cues and orders? These two questions are among the many confronted by "Obedience", a 45-minute film based on the Stanley Milgrim experiment at Yale in the 1950's.

For many students, the ordinariness of the subjects -- who are led to administer what they believe are painful does of electric shock to "students" -- is frightening. They want to know how often they are made to do things without thinking through their responsibility themselves. How does our culture make us fit in? How are we led to treat people the culture considers deviant? How do we develop our ideas on deviance?

Activity 5: Origins of Human Violence

From the time that humans become self conscious (that is, that they began to wonder about what made them unique and why they behaved as they did) they have searched for the source of evil in human life. The book of Genesis suggests humans were created blameless, yet learned to be evil. The myths of many cultures consider the same theme: why is there hate, violence and evil in the world?

Below are quotes from two modern scholars who have explored the origin of human violence. The first is from a playwright, Robert Ardrey. Ardrey, was very much influenced by the work of Konrad Lorenz, a noted animal behaviroist, who studied and observed animals and made some conclusions about animal behavior.

From The Hunting Hypothesis, pp. 10-11:

> The hunting hypothesis may be stated like this:
>
> Man is man, and not a chimpanzee, because for millions upon millions of evolving years we killed for a living.
>
> Many a window looks out on the human scene, each with differing perspectives. For the past 20 years mine has been the window framed by contemporary evolutionary thought. I regard it then as legitimate to translate the question, Why is man man? into the question, Why are we not chimpanzees?
>
> No inquiry into the evolution of human uniqueness can ignore the hidden paradox that must lie somewhere near the heart of our nature. So it may be of value to state the hunting hypothesis in broader terms:
>
> If among all the members of our primate family, the human being is unique, even in our noblest aspirations, it is because we alone through untold millions of years were continuously dependent on killing to survive.

The second person quoted is a cultural anthropologist, Ashley Montagu, who has concentrated his studies on small cultural groupings such as the Eskimo, Kung, and Tasaday.

From The Nature of Human Aggression, pp. 158 and 192:

The Tendency to Cooperation

> The natural tendency of primates to be sociable and somewhat cooperative was developed among early humans into ways of living that promoted cooperation, and further developed among the groups of these humans into techniques and practices in which cooperation was not only the preferred mode of living but actually became essential for survival.
>
> There was cooperation among the men on the hunt as they worked with each other to find and kill the animals they tracked; there was cooperation among the women as they spread across an area, searching and gathering the fruits and nuts for the rest of their diet; cooperation between the groups of men on the one hand and groups of women on the other, as they divided the increasingly complex work that became necessary to continue living; cooperation among all the adults so that the children would grow up in health and safety and learn what they needed to know; and cooperation among all members of a group so that for the first time a person with a broken leg or an illness could survive because there was a safe place to recover and companions to give aid.
>
> ...Let us make clear once more that this is no claim that human beings are innately generous and helpful, any more than they are innately hostile and violent. There are within all of us potentialities to be helpful, just as there are within us potentialities to be violent. But the point of this discussion is that the cooperative drives have played a vastly more important role, during the five million or so years of evolution from ape to human being, than have our potentialities for violence.

Connections:

As students consider these two different passages, they should first consider the nature of the evidence each writer has used. Lorenz and Audrey, using animals, have considered the importance of territory and of defending one's territory. Herds of animals have developed, they believe, ways of maintaining a balanced ecosystem by their sense of territoriality, and they wonder why humans have not. Montagu, considering humans alone, stresses that if humans had a basic genetic potential to violence, there would be no humans left, so precarious was our living system in humanity's early years.

After considering this evidence, students should examine the conclusions which we can draw from these statements. If humans are basically violent, must we act in particular ways to protect ourselves? Is "peace education" possible or even useful? If we subscribe to the belief that cooperative drives are more basic, how does that affect our view of the world? Is this in conflict with how we think we "should" be?

Recent studies have questioned the cultural determinism fashionable in anthropological circles for the last several decades. Students in anthropology or history classes may wish to investigate this topic further.

One question which confuses students who talk about human nature is, What does it mean to be a good person? Is being peaceful the same as being good? Journal entries in which students explore their thoughts about human nature may be useful to students as they try to sort out this complex question.

Activity 6: A research assignment

How do essentially peaceful societies handle anger and/or aggression? If you wish to spend more time on this topic, you may consider anger and aggression among the Zuni, Hopi, Nietstilik Eskimos, Kung, or Tasaday. Why have those societies been able to preserve their basically cooperative cultures?

Connections:

If students choose to do this project, they will be confronted with societies which are not simple and peaceful, but quite complex. Aggressive behavior appears in each group but are channeled either into other activities or turned inward. Erik Erikson's study of the Sioux in Childhood and Society provides an interesting complication to students' thinking, because the Sioux's aggressiveness is also developed and channelled by the culture.

If students work in groups on this project, they may keep journal entries documenting the conflicts which arose in their groups and how they were resolved.

Activity 7: A film -- "After the First"

This short film is about a boy's first hunting lesson with his father, on the occasion of his growing up. The boy's mixed emotions suggest the difficulty we all have in establishing moral values.

Connections:

Before students watch this film, they should discuss any experiences they have had hunting. Steve, a twelve year old depicted in this film, has mixed feelings during this expedition. Students should consider how he felt at the start of the walk in the woods, firing the gun for the first time, watching the birds, going with has father, and seeing his father kill the rabbit.

The relationship between the father and the son is essential to this film. How is that relationship shown in various incidents: the truck using the rifle, shooting the rabbit, the denouement?

What are the many ways of describing Steve and his father? What are their personal values? What does the father mean when he says it is "easier after the first?" Is this statement true in students' lives? What bearing does it have in a discussion of violence? What kinds of experiences have they had where it gets easier to accept or support something "after the first" experience?

Activity 8 : A film -- "The Dead Birds"

Connections:

This 90-minute film is a documentary about the lives of the Dani of New Guinea, whose inter-tribal warfare is sanctioned by myth and tradition. Their lifestyle presents a different form of warfare from modern types -- a ritualized variety which is both a serious part of the culture and also enjoyable to the combattants. "They fight to save their souls...and because they, like birds, must die."

Other sources on this tribe are Under the Mountain Wall, by Peter Mathieson; Gardens of War, by Robert Gardner; and People of the Valley, by Wyn Sargent.

To handle the life, beliefs and war of the Dani requires care and tact on the part of the teacher so that cultural stereotypes are not reinforced. Nevertheless, students who have seen this film have been drawn to analyze both the concept of revenge and the question of whether Dani warfare is more "civilized" than modern warfare, because it kills rarely, and then only one person at a time. Students might want to discuss what constitutes civilized killing.

Comments: (from a ninth grade discussion)

--"A life is a life. You can't count lives."

--"They agree to fight by rules."

--"Their warfare is ecologically sound. They're still there, and we may not be."

Activity 9: A video tape -- "No Frames, No Boundaries"

Connections:

This 20-minute videotape, produced by Creative Initiative, is a somewhat anti-nuclear piece. The introduction is especially useful for expanding on the topic of violence because it introduces the concepts of frames and boundaries: that is, frames of reference and the boundaries they set up. The videotape provides a stimulus for discussing when and how personal frames of reference can be comforting or, on the other hand, can restrict activity and produce conflict.

Activity 10: Responses to Conflict

How do we learn appropriate ways of responding to conflict? How do we learn about violence, its uses and outcomes? Researchers have studied a few sources which you may wish to evaluate in terms of your own and others' experience. With each one, consider how we learn any of the important concepts of values we have been taught.

Television can cause Aggression in children, teens, U.S. Study says (from the Boston Globe, May 5, 1982.)

Violence on television can lead to aggressive behavior by children and teenagers who watch the programs, according to a government review of the last decade of research on this long-debated topic.

"Television and Behavior," a report from the Department of Health and Human Services, concludes that the consensus among scientists is that there is a "causal relationship" between televised violence and aggression.

It says the "great majority" of studies in the laboratory and the field over the 1970's support this conclusion, although a minority of researchers still disagree...

Calling television a "violent form of entertainment," the report found that the percentage of programs containing violence has remained roughly the same over the past decade and during this period "there also has been more violence on children's weekend programs than on prime time television."

The report cautions that "not all children become aggressive, of course," emphasizing that the various studies compare large groups rather than individual cases. But the latest research has expanded to suggest that preschoolers as well as older adolescents and girls as well as boys might be influenced by the televised violence.

The studies cited includes a London sample of teen age boys that found they were more likely to engage in "serious violence" after exposure to television violence. Two other studies of preschool children found heavy television viewing of violent programs led to "unwarranted aggressive behavior in free play."

Connections:

What is the evidence for this conclusion? Do students have personal experience with television violence causing outbursts of aggression? Do they believe there should be censorship of TV violence? Some students may wish to contact the national organization Action for Children's Television (46 Austin St., Newton MA 02159), which lobbies for less violent TV programs.

Some researchers believe violence on TV does not make people more violent, but makes them more fearful of muggings and robberies, irrespective of whether those attacks are apt to occur. Students may wish to explore this issue of fearfulness. What are some possible reactions to feeling unsafe in your neighborhood? Some people have commented that supporting the nuclear arsenal is a response to the lack of personal safety we feel in our lives.

Activity 11:

"History texts ignore horrors of war, study says"
(adapted from the Boston Globe, October 24, 1982.)

American history textbooks generally fail to impress the horrors of war upon schoolchildren, according to a new study of 11 of the most widely used texts.

"Not one of the 11 textbooks raised philosophical questions about the acceptability of war," said the survey, titled "Militarism in Textbooks: An Analysis," and published in the current Bulletin of the Council on Interracial Books for Children.

Bradford Chambers, editor of the Bulletin, said in an interview that the study was inspired in part by the current interest in nuclear disarmament...

A few of the books are singled out for some praise. "Let Freedom Ring: A United States History," written by Richard C. Brown and others, and published by Silver Burdett Co., is cited for offering "a very moving account" of the suffering at Hiroshima and Nagasaki, where the United States dropped atomic bombs during World War II.

"The Free and the Brave," published by Houghton Mifflin and written by Columbia University history Professor Henry F. Graff, was cited as the only one of the 11 texts that had a section which delved into the arms race and the "increased reliance on nuclear weapons."

But the same textbook was criticized in the study for failing to rebuke President Dwight D. Eisenhower for threatening nuclear war to break a deadlock in peace talks during the Korean War.

Graff, in an interview, said the study's criticism was a distortion, adding that "I don't know where you do the preaching in a textbook."

He added, however, that he thought some of the points in the study are well-taken. "This study is saying, 'Hey, we ought to do more about peace in these texts.' And I'm sure this will be reflected in new editions."

Connections:

Students may choose to analyze their own textbooks to see how wars are treated. Are the human dimensions of the battles described, or are there only names, dates, places, and winners? This reading suggests textbooks can be used for political and/ or propagandistic purposes. Is excluding information about the horror of war the same as saying war is acceptable? Is including or excluding such information a form of propaganda? Should, for instance, physics books be required to describe the effects of a nuclear explosion? Who should be responsible for what goes into textbooks? What role should students play?

Activity 12: A film -- "Neighbors"

The film you are about to see concerns two neighbors -- mirror images of each other -- who both wish to own the single flower which grows on their mutual property line.

Connections:

The escalation of violence in this film is both amusing and horrifying to many students. Why the react as they do in watching the film is the topic for a recommended journal entry. During the discussion, the nature of the escalation as well as the results are important to consider. Do students believe that in violent conflicts both combatants lose? As students explore this perspective that violence is self-defeating, particularly as it relates to their own lives, they may wish to explore the meaning of the following statement:

"One of the reasons we are so ready to dislike the Soviet Union so much is that it is a mirror image of ourselves."

This insight was offered by Rev. Spencer Parsons at a course for teachers who were interested in learning to use these curriculum materials. His presentation outlined many parallels he perceived in both Soviet and American societies. Another person who propounds a similar point of view is Mme. Alva Myrdal, Nobel Peace Prize winner of 1982.

Myrdal charges U.S., Soviet create 'a cult of violence'
(Adapted from the Boston Globe)

Nobel Peace Prize-winner Alva Myrdal bitterly attacked the United States and the Soviet Union yesterday, saying they have created a "cult of violence" that threatens global war and breeds urban crime.

In an impassioned address, the 80-year-old veteran disarmament campaigner also called for an international peace conference in 1983.

"There is no doubt that what the superpowers are now planning and in which they are investing billions, is precisely the preparation for waging war," Myrdal said.

"The age in which we live can only be described as one of barbarism," she said. "Our civilization is in the process not only of being militarized, but also being brutalized.

"Many countries persecute their own citizens and intern them in prisons or concentration camps. Oppression is becoming more and more a part of the system, and Lech Walesa's sufferings may stand as a symbol for the way in which human rights are being trampled down in one country after another."

"The cult of violence has so far permeated relations between people that we are compelled to witness as well an increase in everyday violence," she said.

Quoting from the will of Alfred Nobel, the Swedish inventor of dynamite whose legacy endowed the peace prize, Myrdal called for an international peace congress next year to foster "the mighty popular movement against armaments which is now gaining strength."

Activity 13: Another look at violence

The political philosopher Hannah Arendt challenges us to look at violence in another way in her book *On Violence*. This selection is excerpted from pp. 63 and 64.

"That violence often springs from rage is a common-place, and rage can indeed be irrational and pathological, but so can every other human affect. It is no doubt possible to create conditions under which men are dehumanized -- such as concentration camps, torture famine -- but this does not mean that they become animal-like; and under such conditions, not rage and violence, but their conspicuous absence is the clearest sign of dehumanization. Rage is by no means an automatic reaction to misery and suffering as such; no one reacts with rage to an incurable disease or to an earthquake or, for that matter to social conditions that seem to be unchangeable. Only where there is reason to suspect that conditions could be changed and are not does rage arise. Only when our sense of justice is offended do we react with rage... To resort to violence when confronted with outrageous events or conditions is enormously tempting because of its inherent immediacy and swiftness. To act with *deliberate* speed goes against the grain of rage and violence, but this does not make them irrational. On the contrary, in private as well as public life there are situations in which the very swiftness of a violent act may be the only appropriate remedy. The point is not that this permits us to let off steam -- which indeed can be equally well done by pounding the table or slamming the door. The point is that under certain circumstances violence -- acting without argument or speech and without counting the consequences -- is the only way to set the scales of justice right again... In this sense, rage and violence that sometimes -- not always -- goes with it belong among the "natural" *human* emotions, and to cure man of them would mean nothing less than to dehumanize or emasculate him. That such acts, in which men take the law into their own hands for justice's sake, are in conflict with the constitutions of civilized communities is undeniable; but their antipolitical character, so manifest in Melville's great story, does not mean that they are inhuman or "merely" emotional.

Connections:

As students examine this long passage, they may try to figure out for what circumstances violence would be the most appropriate and beneficial response. What would be the long vs. short-term considerations? What would they be willing to fight for? Why?

In an earlier section of the book (pp. 51-56), Ms. Arendt discusses how absence of power leads to violence. Teachers may wish to share some of the following ideas with advanced students.

"Power needs no justification, being inherent in the very existence of political communities; what it does need is legitimacy. The common treatment of these two words as synonyms is no less misleading and confusing than the current equation of obedience and support. Power springs up whenever people get together and act in concert, but it derives its legitimacy from the initial getting together rather than from any action that then may follow. Legitimacy, when challenged, bases itself on an appeal to the past, while justification relates to an end that lies in the future. Violence can be justifiable, but it never will be legitimate. Its justification loses in plausibility the farther its intended end recedes into the future. No one questions the use of violence in self-defense, because the danger is not only clear but also present, and the end justifying the means is immediate.

"...Nowhere is the self-defeating factor in the victory of violence over power more evident than in the use of terror to maintain domination, about whose weird successes and eventual failures we know perhaps more than any generation before us. Terror is not the same as violence; it is, rather, the form of government that comes into being when violence, having destroyed all power, does not abdicate but, on the contrary, remains in full control. It has often been noticed that the effectiveness of terror depends almost enitrely on the degree of social atomization.

"...To sum up: politically speaking, it is insufficient to say that power and violence are not the same. Power and violence are opposites; where the one rules absolutely, the other is absent. Violence appears where power is in jeopardy, but left to its own course it ends in power's disappearance. This implies that it is not correct to think of the opposite of violence as nonviolence; to speak of nonviolent power is actually redundant. Violence can destroy power; it is utterly capable of creating it. Hegel's and Marx's great trust in the dialectial "power of negation," by virtue of which opposites do not destroy but smoothly develop into each other because contradictions promote and do not paralyze development, rests on a much older philosophical prejudice: that evil is no more than a privative *modus* of the good, that good can come out of evil; that, in short, evil is but a temporary manifestation of a still-hidden good. Such time-honored opinions have become dangerous. They are shared by many who have never heard of Hegel or Marx, for the simple reason that they inspire hope and dispel fear -- a treacherous hope used to dispel legitimate fear. By this, I do not want to stress that violence cannot be derived from its opposite, which is power, and that in order to understand it for what it is, we shall have to examine its roots and nature.

Activity 14: What is Worth Fighting For?

The following three passages describe the motives of two young German soldiers as they prepared to set off for the front at the beginning of World War I and what a third young man found during battle.

WALTER LIMMER, AGE 24

Leipzig (still, I'm sorry to say), August 3rd, 1914.

Hurrah! at last I have got my orders: to report at a place here at eleven o'clock to-morrow. I have been hanging about here, waiting, from hour to hour. This morning I met a young lady I know, and I was almost ashamed to let her see me in civilian clothes. You too, my good Parents, you will agree that I am right in saying that I don't belong in this peaceful Leipzig any more... We must have a broad outlook and think of our nation, our Fatherland, of God -- then we shall be brave and strong.

FRANK BLUMENFELD, AGE 23

September 23, 1914 (in the train, going north).

...I want to write to you about something else, which, judging from bits in your letters, you haven't quite understood; why I should have volunteered for the war? Of course it was not from any enthusiasm for war in general, nor because I thought it would be a fine thing to kill a great many people or otherwise distinguish myself. On the contrary, I think that war is a very, very evil thing, and I believe that even in this case it might have been averted by a more skilful diplomacy. But, now that it has been declared, I think it is a matter of course that one should feel oneself so much a member of the nation that one must unite one's fate as closely as possible with that of the whole... What counts is always the readiness to make a sacrifice, not the object for which the sacrifice is made.

This war seems to me, from all that I have heard, to be something so horrible, inhuman, mad, obsolete, and in every way depraving, that I have firmly resolved, if I do come back, to do everything in my power to prevent such a thing from ever happening again...

Life in the Trenches

by Erich Maria Remarque, 1929

We wake up in the middle of the night. The earth booms. Heavy fire is falling on us. We crouch into corners, we distinguish shells of every calibre.

Each man lays hold of his things and looks again every minute to reassure himself that they are still there. The dug-out heaves, the night roars and flashes. We look at each other in the momentary flashes of light, and with pale faces and pressed lips shake our heads.

Every man is aware of the heavy shells tearing down the parapet, rooting up the embankment and demolishing the upper layers of concrete...Already by morning a few of the recruits are green and vomiting. They are too inexperienced.

Connections:

What were the motives of the first two young men? What did they expect war to be like? How were they enculturated to accept or regret war and violence? How does that show in their words? If their wartime experiences were similar to those of Remarque, how might their attitudes about war have been changed? Looking back, what might they think of their motives?

This might be a good time to interview people who have fought in wars and try to understand their thinking about the decision to defend their country.

CHAPTER IV:

CONSTRUCTING A VALUE SYSTEM

Activity 1: In your journals define beauty.
Share thoughts with class.
In your journal define progress.
Share thoughts with class.

Activity 2: "The Flying Machine"

In the year A.D. 400, the Emperor Yuan held his throne by the Great Wall of China, and the land was green with rain, readying itself toward the harvest, at peace, the people in his dominion neither too happy nor too sad.

Early on the morning of the first day of the first week of the second month of the new year, the Emperor Yuan was sipping tea and fanning himself against a warm breeze when a servant ran across the scarlet and blue garden tiles, calling, "Oh, Emperor, Emperor, a miracle!"

"Yes," said the Emperor, "the air is sweet this morning."

"No, no, a miracle!" said the servant, bowing quickly.

"And this tea is good in my mouth, surely that is a miracle."

"No, no, Your Excellency."

"Let me guess then -- the sun has risen and a new day is upon us. Or the sea is blue. That now is the finest of all miracles."

"Excellency, a man is flying!"

"What?" The Emperor stopped his fan.

"I saw him in the air, a man flying with wings. I heard a voice call out of the sky, and when I looked up, there he was, a dragon in the heavens with a man in its mouth, a dragon of paper and bamboo, coloured like the sun and the grass."

"It is early," said the Emperor, "and you have just wakened from a dream."

"It is early, but I have seen what I have seen!" Come, and you will see it too."

"Sit down with me here," said the Emperor. "Drink some tea. It must be a strange thing, if it is true, to see a man fly. You must have time to think of it, even as I must have time to prepare myself for the sight."

They drank tea.

"Please," the servant said at last, "or he will be gone."

The Emperor rose thoughtfully. "Now you may show me what you have seen."

They walked in to a garden, across a meadow of grass, over a small bridge, through a grove of trees, and up a tiny hill.

"There!" said the servant.

The Emperor looked into the sky.

And in the sky, laughing so high that you could hardly hear him laugh was a man; and the man was clothed in bright papers and reeds to make wings and a beautiful yellow tail, and he was soaring all about like the largest bird in a universe of birds, like a new dragon in a land of ancient dragons.

The man called down to them from high in the cool winds of morning, "I fly, I fly!"

The servant waved to him, "Yes, yes!"

The Emperor Yuan did not move. Instead he looked at the Great Wall of China now taking shape out of the farthest mist in the green hills, that splendid snake of stones which writhed with majesty across the entire land. That wonderful wall which had protected them for a timeless time from enemy hordes and preserved peace for years without number. He saw the town, nestled by itself by a river and a road and a hill, beginning to waken.

"Tell me," he said to his servant, "has anyone else seen this flying man?"

"I am the only one, Excellency," said the servant, smiling at the sky, waving.

The Emperor watched the heavens another minute and then said, "Call him down to me."

"Ho, come down, come down!" The Emperor wishes to see you!" called the servant, hands cupped to his shouting mouth.

The Emperor glanced in all directions while the flying man soared down the morning wind. He saw a farmer, early in his fields, watching the sky, and he noted where the farmer stood.

The flying man alit with a rustle of paper and a creak of bamboo reeds. He came proudly to the Emperor, clumsy in his rig, at last bowing before the old man.

"What have you done?" demanded the Emperor.

"I have flown in the sky, Your Excellency," replied the man.

"What have you done?" said the Emperor again.

"I have just told you!" cried the flyer.

"You have told me nothing at all." The Emperor reached out a thin hand to touch the pretty paper and the birdlike keel of the apparatus. It smelled cool, of the wind.

"Is it not beautiful, Excellency?"

"Yes, too beautiful."

"It is the only one in the world!" smiled the man. "And I am the inventor."

"The only one in the world?"

"I swear it!"

"Who else knows of this?"

"No one. Not even my wife, who would think me mad with the sun. She thought I was making a kite. I rose in the night and walked to the cliffs far away. And when the morning breezes blew and the sun rose, I gathered my courage, Excellency, and leaped from the cliff. I flew! But my wife does not know of it."

"Well for her, then," said the Emperor. "Come along."

They walked back to the great house. The sun was full in the sky now, and the smell of grass was refreshing. The Emperor, the servant, and the flier paused within the huge garden.

The Emperor clapped his hands, "Ho, guards!"

The guards came running.

"Hold this man."

The guards seized the flier.

"Call the executioner," said the Emperor.

"What's this!" cried the flier, bewildered. "What have I done?" He began to weep, so that the beautiful paper apparatus rustled.

"Here is the man who has made a certain machine," said the Emperor, "and yet asks us what he has created. He does not know himself. It is only necessary that he create, without knowing why he has done so, or what this thing will do."

The executioner came running with a sharp silver axe. He stood with his naked, large-muscled arms ready, his face covered with a serene white mask.

"One moment," said the Emperor. He turned to a nearby table upon which sat a machine that he himself had created. The Emperor took a tiny golden key from his own neck. He fitted this key to the tiny, delicate machine and wound it up. Then he set the machine going.

The machine was a garden of metal and jewels. Set in motion, birds sang in tiny metal trees, wolves walked through miniature forests, and tiny people ran in and out of sun and shadow, fanning themselves with miniature fans, listening to the tiny emerald birds, and standing by impossibly small but tinkling fountains.

"Is it not beautiful?" said the Emperor. "If you asked me what I have done here, I could answer you well. I have made birds sing, I have made forests murmur, I have set people to walking in this woodland, enjoying the leaves and shadows and songs. That is what I have done."

"But, oh, Emperor!" pleaded the flier, on his knees, the tears pouring down his face. "I have done a similar thing! I have found beauty. I have flown on the morning wind. I have looked down on all the sleeping houses and gardens. I have smelled the sea and even seen it, beyond the hills, from my high place. And I have soared like a bird; oh, I cannot say how beautiful it is up there, in the sky, with the wind about me, the wind blowing me here like a feather, there like a fan, the way the sky smells in the morning! And how free one feels! That is beautiful, Emperor, that is beautiful too!"

"Yes," said the Emperor sadly, "I know it must be true. For I felt my heart move with you in the air and I wondered: What is it like? How does it feel? How do the distant pools look from so high? And how my houses and servants? Like ants? And how the distant towns not yet awake?"

"Then spare me!"

"But there are times," said the Emperor, more sadly still, "when one must lose a little beauty if one is to keep what little beauty one already has. I do not fear you, yourself, but I fear another man."

"What man?"

"Some other man who, seeing you, will build a thing of bright papers and bamboo like this. But the other man will have an evil face and an evil heart, and the beauty will be gone. It is this man I fear."

"Why? Why?"

"Who is to say that someday just such a man, in just such an apparatus of paper and reed, might not fly in the sky and drop huge stones upon the Great Wall of China?" said the Emperor.

No one moved or said a word.

"Off with his head," said the Emperor.

The executioner whirled his silver axe.

"Burn the kite and the inventor's body and bury their ashes together," said the Emperor.

The servants retreated to obey.

The Emperor turned to his hand-servant, who had seen the man flying. "Hold your tongue. It was all a dream, a most sorrowful and beautiful dream. And that farmer in the distant field who also saw, tell him it would pay him to consider it only a vision. If ever the word passes around, you and the farmer die within the hour."

"You are merciful, Emperor."

"No, not merciful," said the old man. Beyond the garden wall he saw the guards burning the beautiful machine of paper and reeds that smelled of the morning wind. He saw the dark smoke climb into the sky. "No, only very much bewildered and afraid." He saw the guards digging a tiny pit wherein to bury the ashes. "What is the life of one man against those of a million others? I must take solace from that thought."

He took the key from its chain about his neck and once more wound up the beautiful miniature garden. He stook looking out across the land at the Great Wall, the peaceful town, the green fields, the rivers and streams. He sighed. The tiny garden whirred its hidden and delicate machinery and set itself in motion; tiny people walked in forests, tiny foxes loped through sun-speckled glades in beautiful shining pelts, and among the tiny trees flew little bits of high song and bright blue and yellow colour, flying, flying, flying in that small sky.

"Oh," said the Emperor, closing his eyes, "look at the birds, look at the birds!"

Activity 3: In your journals, answer:

1. How does the emperor define beauty? Why?
2. How does his definition compare to yours?
3. How does the emperor's attitude about progress compare to yours?
4. Are there any technologies, discoveries, research that ought to be stopped? Who should decide this?

Activity 4:

Which is more beautiful?

1. An elaborated animated miniature garden with moving birds and animals made of 14 kt. gold and precious jewels.

2. A person hang-gliding over a meadow at sunrise.

Comments:

Some student comments:

"Beauty is something that can't be grasped. It leaves you feeling sad because it's not a thing you can keep forever. It's something that can't ever be recreated the same way."

"Beauty is decided by the things that can't hurt someone, or else it's not beauty, so the garden is beautiful."

"Beauty is an experience that overwhelms you."

"Maybe beauty and progress are related and the beauty is where the progress shows forward movement."

Connections:

In order to have students experience decision making about technology pose the following problems summarized from an interview with Albert Rosenfeld, author of Prolengevity, in The Futurist magazine, February, 1977.

"If you can find the major secrets of aging and counteract whatever it is that makes us age and permits somebody to live for 150 years, then why can't you make him live until 200, to 300, and so on?...

"Prolonging life won't be complicated. There's no reason why it shouldn't be in the form of medications -- drugs, hormones, injections -- and is inexpensive and available as any other medication."

The class is the Food & Drug Administration -- and their task is to decide whether the drug should be marketed. Subcommittees composed of five students discuss the pro's and con's and make a recommendation to the whole class to vote and make a final decision.

After the vote, discuss the ways that the decision was reached. Compare the thinking of the students to the Emperor's thinking in "The Flying Machine". Many of the students who did not support the Emperor's decision end up voting to ban the drug using the same think process and reasons as the Emperor. It is interesting for students to note this.

Activity 5: Self Defense Analogies

In discussing the origins and uses of violence, we have considered the reasons for which we might use violence. Two reasons were self defense or deterrence. How do we rightly protect that which we belive to be ours? How much force may be rightly exert against force? Consider the following cases in self defense:

Situation 1: You are in your home babysitting for your little brother when an intruder enters the house. There is a family gun in the desk near you. What should you do?

Situation 2: One dark night, while you are walking in a deserted part of town, you realize that you are being followed by three hulking thugs. They start to run toward you. How might you respond?

Situation 3: You and Joe have been haggling for weeks since you stole Joe's notebook with all his research, to get back at his having spoiled your science experiment. Today is a serious fight. Joe picks up a steel bar and lunges at your head. What do you do?

Situation 4: For several weeks your store, your sole source of income, has been raided by a thief. You rig up a system to foil the crook. When s/he opens the front door, s/he will trigger a shot gun aimed at head-to-chest height of any adult intruder. On Friday night your plan works and Sue is killed as she enters your store. As you look back what do you think of your action?

Situation 5: You are on an airplane and one of the passengers holds up a gun and demands to be taken to a different country. If his demands are met, no one will be hurt. An armed off-duty police officer is on board. What should s/he do?

Connections:

Before students examine the five situations, they should consider the possible range of acceptable responses in a situation where they or their property were endangered. What issues would they consider relevant to answering the questions? Each of the above situations deals with a particular consideration to complicate student thinking on this issue of self defense. In one class, students grappling with this problem remembered the Falklands Crisis, particularly the incident of the British destroying an Argentine submarine believed to be headed toward a large British troop ship. The sinking of the Argentine submarine led one student to ask, "But did they really know what Argentina was going to do?" And another student challenging, "Could they wait to find out?"

As students challenge each other's responses, they should be helped to consider the presence of options. Whether there is a "clear and present danger," whether it's necessary that the degree of violence in the response fit the violence in the attack, and whether they would really carry out their threatened response or only bluff. As one student responded "Run like hell -- you're never really going to be able to kill someone." Students are encouraged to record their ideas in a journal entry.

Comments:

"It was interesting talking about self defense because it's easy to say get rid of nuclear weapons or it's bad to kill people but when you think about defending yourself it brings out your real emotions. I think the reason we still have nuclear weapons is that lots of people mouth off about how much they hate them because they know it in their minds but deep inside we all are scared and we still want to defend ourselves so we talk but don't act. When I heard everyone say that they didn't think we should kill but then when it was about self defense, or defending your family, they got confused. So maybe this course should be about how to get our minds and our deep inside feelings together so we can stop being too scared and still find ways to protect ourselves."

--journal entry, a high school student

Activity 6: Deterrence and Gun Control

> "A well regulated militia being necessary to
> the security of a free state, the right of
> the people to keep and bear arms, shall not
> be infringed." Amendment II, Bill of Rights

When the framers of the Constitution adopted this amendment, they were thinking of their own historical experience of the British Army marching to confiscate muskets and other firearms belonging to the Minutemen. Indeed, a firearm may have been a necessity for some settlers in the early days of the Republic, with isolated frontier homesteads and distant police or military protection. Had the framers envisaged our modern age of rapid telecommunications, paid police, and standing professional army, would they still support this amendment? Today, our "right to bear arms shall not be infringed" has become the rallying cry of those who believe we are not only entitled to, but also need for our own safety, posession of firearms.

Consider the following cases:

It's the Law in Kennesaw: Gun in Every House
(adapted from the Boston Globe, n.d.)

Mandatory gun ownership became the law in this Atlanta suburb yesterday, bringing the city another wave of publicity and a legal challenge from the American Civil Liberties Union, but little in the way of reaction from the residents.

"I don't feel any different" having a gun in the house now, said Karen Martin, a housewife. But she added, "It feels good to know if anybody came in here you could get rid of them real fast."

The ordinance, adopted unanimously by the City Council March 15, requires heads of households in the city of 5400 people to own and maintain a firearm and ammunition. It exempts convicted felons, the disabled and those with religious objections.

Meanwhile, the American Civil Liberties Union asked a federal court in Atlanta to prohibit enforcement of the law, said Gene Guerrero, executive secretary of the ACLU in Georgia.

Guerrero, who said the ACLU acted in behalf of Kennesaw resident Richard Butler, termed the law "an illegal, unconstitutional taking of liberty (and) an invasion of privacy in that the government of Kennesaw is telling people what they must do without any showing of any compelling reason to do so."

Must-Own-Gun Law Cuts Town's Burglaries
(Boston Globe, Friday, July 9, 1982)

Kennesaw homes have been virtually free of burglars since the community instituted an ordinance requiring each household to have a gun, officials said yesterday.

Kennesaw Police Chief Robert Ruble said there had been only one home burglarized since the ordinance was announced in March and none since it went into effect June 1.

Crime Rise Heats Gun Law Debate
(Special to the Boston Globe, March 7, 1981)

"How long are we to wait?" a Brooklyn Congressman cried out...in 1968. "Are we to wait until another President is assassinated?"

Today, bills to curb gun violence still sit on the "front burner" in Congress, pistols remain as easy to get in most cities as contraband drugs, and in the 13 intervening years, more that 120,000 Americans have been murdered with firearms.

Connections:

As students discuss the three news articles, they may wish to consider the criteria previously raised in the situations of self defense as well as the problems raised in the movie "Neighbors". Does violence beget more violence, or is the threat of returning violence an acceptable and effective deterrent? It is useful to define the word deterrent at this point, and to note that a deterrent is not the same as prevention. In that sense, students should challenge the presumption that Kennesaw's Fire Arms ordinance "caused" the decrease in burglaries; and that the continued failure to regulate the use of handguns "causes" an increase in violent deaths.

Activity 7: Exploring Non-Violence

Mahandas Gandhi was an Indian leader who used non-violent protest as the means to induce the British to relinquish their imperial hold on India. Gandhi believed that peace would come to the world only if the revolution that brought it began in the hearts of people and affected every aspect of their way of life. A person, he said, "can not do right in one department whilst he is occupied in doing wrong in any other department. Life is one indivisible whole." He went on to define non-violence.

> "Non-violence is the greatest force at the disposal of mankind. It is greater than the mightiest weapon of destruction... It is non-violence if we merely love those that love us. It is non-violence only when we love those that hate us."

Connections:

Students should explore the ways in which Gandhi used non-violence and how the philosophy was adapted by Martin Luther King for the American Civil Rights movement. Why did Gandhi believe one had to use non-violent means to reach a non-violent end? Does the movie "Neighbors" shed light on his beliefs? Have students ever used non-violence in a confrontation when others might have chosen a violent route? What was the effect? If the film "Gandhi" has been seen by students, a discussion of it may be used to further explore their thinking about non-violence.

Activity 8:

The Weakness in Gandhi's Approach
by Herbert London
(adapted from the Boston Globe, February 1, 1983)

Gandhi was a unique statesmen who brought India its independence through his tactics of passive resistance against British colonial rule. But comments like "That's what we ought to do against our enemies" are sadly lacking in historical perspective.

That passive resistance was successful against English rule is as much a statement about the British as it is about Gandhi's followers. Notwithstanding their moments of brutality, the British were put in the reluctant position of having to escalate the violence of their rule in order to maintain control. That price ultimately became too high for any British government and for the sensibilities of the British people. They succumbed to Gandhi's strength and his tactics. But consider this same scenario with Soviet colonial rulers. Would passive resistance work against "yellow rain"? Do these tactics have any application for Afghan freedom fighters?

Gandhi is quoted as having said, "ultimately tyrants are defeated by love and truth." When he is confronted by an interlocuter who asks if he would apply his tactics to Hitler, he responds by saying, yes, even a Hitler would succumb to this approach. What is not asked is what happens to that generation overrun by Hitler's armies? Is passive resistance an appropriate reaction to extermination camps? The difference between passive resistance against an essentially democratic foe and against a totalitarian enemy was not considered in the film "Gandhi" and not really considered in Gandhi's philosophy.

Connections:

Herbert London's reaction to Gandhi's work may help complicate student thinking. If the enemy is seen to be so powerful and evil, do we need to use other means of self defense? How, in any event, do we evaluate the type of tactics an enemy might use in advance? Can any of the criteria raised in self defense analogies be used? Are there clear-cut answers? Perhaps students can develop a criteria for any situations to which they would agree to the use of violence.

Activity 9:

Capital Punishment as a Form of Deterrence
(from Time Magazine, 1/24/83, p. 30)

Henry Brisbon, 28, sits on death row in a prison in Illinois. He landed in prison for his part in three murders and robberies which took place in 1973. At that time he and three other men forced a car off the road, forced the female driver to strip, tortured and then shot her. Later that evening, they stopped another car and shot the young couple who were in it. Their total take from the spree -- $54, two watches, and two rings.

Confined to Stateville Correctional Center after his conviction for the murders, Brisbon was sentenced to 1000 to 3000 years in prison. During his imprisonment he was involved in 15 attacks on guards or other inmates, and incited one other riot, and eventually the stabbing to death of a fellow inmate.

"I'm no bad dude," he says of himself, "just an anti-social individual."

What should be done with Henry Brisbon?

Connections:

As students discuss the case of Henry Brisbon, the teacher should appoint a recorder to take very accurate notes of the student comments. As they consider issues of punishment, deterrence, present danger to society, the value of human life, and trading of life, they should be encouraged to compare their statements to those they made about self defense and gun control.

The case of Henry Brisbon is in some ways an "easy" case. There is no doubt of his guilt. He has shown himself to be a danger both in and out of prison. And we have no evidence of either his remorse or his willingness to be rehabilitated. This "easyness" is what makes his case so "hard" for he brings us into direct contact with the most exacting of ethical principles about the value of human life -- and our concerns with protecting our own lives. Should any convicted murderers be executed? Should all convicted murderers be executed? What exceptions, if any, would students suggest?

Activity10: More information on capital punishment

One of the most powerful arguments in favor of the death penalty is that of deterrence: the principle that society can successfully inhibit or discourage potential felons from committing murder if they know that they, themselves, will be killed in return. Deterrence is not prevention. Prevention is absolute. There are no exceptions. Deterrence is the probable "restriction" of the murderer. As you consider the concept of the death penalty as a deterrent for future murders, what questions do you ask yourself? What further information do you need?

Homicide rate in 1933 -- 9.7 homicides per 100,000 Americans
Homicide rate in 1960 -- 4.7 homicides per 100,000 Americans
Homicide rate in 1973 -- 9.4 homicides per 100,000 Americans

82 executions in 1950
49 executions in 1959
2 executions in 1967

Michigan, with no death penalty after 1947, had the same number of homicides as Ohio and Indiana, adjoining states.

In 1929 South Dakota adopted the death penalty, and the homicide rate fell 20% in 10 years. North Dakota abolished the death penalty, and the homicide rate fell 40% in 10 years.

Economist Isaac Ehrlish argues that the 3,411 executions carried out between 1933 and 1967 discouraged enough murderers so that 27,000 victims' lives were saved.

Connections:

The question raised by these statistics is the fact-value conflict. Students need to clarify which facts they need to ascertain. Does the death penalty, indeed, deter murders? And whether it does or not, do they believe in taking a life for a life? In journal entries, students are encouraged to compare their attitudes about the death penalty to those they held with respect to gun control and self defense. Do they find themselves more or less sure of their opinions?

This discussion mirrors in many ways the kinds of themes which exist in a discussion of nuclear weapons: deterrence, self defense, and violence. If it were absolutely certain that executing an individual would save a certain number of lives, would that execution be acceptable? If it were absolutely certain that using a nuclear weapon would prevent (not deter) another country's attack and further death and destruction, would that attack be justified?

Activity 11: War and Self Defense

According to the nineteenth century Prussian soldier, Carl von Clausewitz, war is everywhere "an act of force to compel the enemy to do our will." Warfare, he said, can build to "absolute war", the total crushing of the enemy. But war is usually limited because it "is nothing but the continuation of policy with other means." By that, he meant that statesmen and generals tailor the force they use in war to fit their ends; they keep control of their troops during battle, because they do not want to destroy what it is they want to conquer.

The nature of nation-states -- like the U.S.A., China, or Nigeria -- is that they are independent and not subject to any higher authority which can either control or protect them. Clausewitz said the system of independent nation-states led to anarchy, a lack of order and protection. Thus the nation-states believe they have to arm themselves to prepare for an inevitable attack.

Military strategy has traditionally been made up of three questions: First, what is the political purpose we want to achieve with the use of our military force? That is, what do we want to compel the enemy to do? Second, how will we deploy that force to achieve our ends? What kinds of weapons should we have and where should we put them? Third, when and how should that force be used? Do we need surprise attack, or a small show of force, etc.?

In traditional war, the questions follow in order -- 1,2,3. It used to be that we devised the technology to fit our needs and aims. In ancient times the Macedonians invented a longer spear to reach beyond the Greek's spears. Sailing modern warships with massive cannons induced the Japanese to open their ports to American goods in the nineteenth century. In the present era, however, we have to consider the possibility of nuclear attack. Perhaps nuclear war requires that we reconsider Clausewitz's three questions. If the technology is so powerful that its use can destroy an entire society and render the land uninhabitable, does that then imply that nuclear weapons can no longer be used for political needs?

It is often said that the best defense is a good offense. Such thinking has been useful in some traditional wars. But can we carry that thinking to the modern international conflicts with nuclear weapons?

Connections:

Clausewitz has suggested we always consider ends and means. If we can achieve our goal, and not detract from it, use the means available and necessary. Students may wish to examine this position on self defense, particularly as it relates to innocent bystanders. Under what circumstances if any would they attack first? What makes an attack justifiable in their eyes?

Activity 12: Ethical Perspectives

--Eye for eye, tooth for tooth, hand for hand, foot for foot. Deuteronomy, ix, 21

--Therefore all things whatsoever you would that men should do unto you, do ye even so to them: for this is the law and the prophets.
Matthew, vii, 12

--Blessed are the merciful, for they shall obtain mercy.
Matthew, v, 5

--To the good I would be good. To the not good I would also be good, in order to make them good.
From Sayings of Lao Tzu

In a violent world where we as individuals, and society as a whole, seek to protect ourselves against attack or intrusion, we often search for some ethical guidelines on which to act fairly. Yet even the ethical teachings of our traditions can be contradictory and give us confusing guidance. As the four quotations indicate, there is no one approved way of establishing justice. Do any of the above statements correspond to your own ethical judgement?

Connections:

Why do students think these quotes have been included? We kill for many purposes -- to obtain food, to eradicate insects, etc. What would students be willing to die for? Causes? Other people? This discussion could include thinking about family, community and then the country. What is important to them? What would they defend? Are there limits to the type of defense they would support?

Activity 13:

"Deterrence Works Only if the Threat is Real"
by David B. Wilson
(The Boston Globe, December 13, 1982)

Freeman Dyson, speaking at MIT this year, stressed the reversal of relationship between man and his weapons brought about by technological "progress". The warrior, dwarfed by his engines of mass destruction, becomes their servant rather than their master.

This makes war folly and martial valor obsolete.

Nuclear weapons replace massed infantry, armor, warships and bombing planes. Missiles are now capable of accomplishing cheaply in seconds invasions, sieges and massacres formerly more costly, time-consuming and politically difficult to arrange.

Given the social and economic costs of the old-fashioned means of making war, nukes are, functionally at least, terrific. They don't need health care, pensions or life insurance, don't frag their officers, don't write their congressmen, don't demonstrate against the draft, don't insist on shopping at commissaries and PX's and don't have mothers, affinity groups, dependents or associated psychiatric problems.

The paradoxical problem with nukes is that they are almost useless, given the practical obstacles to their employment. Nuke somebody and he is likely to nuke you back. Being armed with a weapon so terrible as to prevent its use in all but the remotest of contingencies very much resembles not being armed at all.

In order for nukes to have their intended effect, which is the intimidation of the adversary (thereby preventing conflict), the adversary must be persuaded that the possessor of the weapons is willing to use them. In order to persuade the adversary, the possessor of the nukes must act as though he intended to use them, almost to the point of persuading himself that he really means to do so.

It is fairly easy to send Marines to Lebanon or, in the Soviet case, divisions to Afghanistan. So long as the nuclear adversary is not provoked into launching missiles, the use of conventional force may even be facilitated by the nuclear threat. Nobody would sensibly argue that the world today is a peaceful place.

Non-nuclear war as an instrument of national policy is feasible to the point at which it is perceived to threaten to generate the exchange of strategic weapons.

Vietnam and Korea are the most egregious examples. But the Sovietization of Cuba and associated constructive repeal of the Monroe Doctrine, the Berlin blockade and the building of the Berlin Wall, the Red Army's ruthless erasure of revolts in Hungary and Czechoslovakia and coercion of Poland are examples of episodes which, in pre-nuclear times, might have amounted to causes of major war.

Now a great many people, in the United States and around the world, have somehow come to believe that the threat to peace and human survival arises from the existence of nuclear hardware.

Certainly these weapons have the capacity to destroy civilization or, perhaps, even the biosphere.

But it does not follow that the reduction of the arsenals, on either side or both, would render a World War III, with its near-certainty of a nuclear climax, less likely.

If, by the reduction of megatonnage, conflict appears to be a practical means to ends -- as it now is not -- going to war for liberty of socialism or the oil of Arabia, for either side, is going to be less unthinkable. Deterrence may be morally flawed, as the National Conference of Catholic Bishops says, but, so far, it has worked.

Reduce nuclear arsenals to a point at which the United States and the Soviet Union have nuclear weapons only sufficient to inflict, say, two million casualties on the other, and you render the temptation more tempting and the inhibition less inhibiting.

If wishes were horses, the old saying goes, beggars would ride. It is reasonable to expect that the most jingoistic American militarist and the most passionately convinced Russian Communist both wish that nuclear weapons would vanish.

But in their absence, would not these two mortal enemies be more likely to attempt to destroy each other by "conventional" means, a misnomer in the sense that technology in the last generation has developed some innovative, nasty new surprises which do not depend on fission or fusion for their effect on human beings?

> Further, in a prolonged, non-nuclear war the side which perceives itself to be losing would almost certainly be forced to resort to the nuclear option. The Bomb is, literally, unforgettable. Indeed, in a major war between industrialized countries, with massed armor engaged and cities under bombardment, neither side could affort not to prepare to "go to the nukes"; and each would expect the other to make such preparation.

Connections:

David Wilson raises an important point in our discussion of morality in war. If saving lives is an ethical position, can we save more lives by being ready to use force? How do his ideas compare to Gandhi's? Students may wish to write in their journals about why these issues may seem confusing to them.

Activity 14: The War in Vietnam

American involvement in the war in Vietnam ended over ten years ago. Yet debate on the war has not ended, and in fact, scholarly study of the conflict has increased in recent years. Of particular interest has been how the military aspect of the war was hampered by lack of popular support for the purposes of the war and the violence it caused.

The following is from the New York Times Magazine, February 13, 1983:

> It was this lack of support for the war which also fostered the idea that the Vietnam War was more immoral than other wars, Colonel Summers believes. "People talk about the picture of the little girl running down the road who got napalmed," he says. "But tens of thousands of little girls got incinerated in the fire-bomb raids on Dresden and Tokyo in World War II and we don't remember. The difference is we believed World War II was legitimate."
>
> To underscore this point, Colonel Summers quotes from an article by General Weyand, the last American commander in Vietnam: "As military professionals we must speak out, we must counsel our political leaders and alert the American public that there is no such thing as a 'splendid little war.'... War is death and destruction. The American way of war is particularly violent, deadly and dreadful. We believe in using 'things' -- artillery, bombs, massive firepower -- in order to conserve our soldiers' lives. ... The Army must make the price of involvement clear before we get involved, so that America can weigh the probable costs of involvement against the dangers of noninvolvement. For there are worse things than war."

Connections:

What does Weyand mean when he says "For there are worse things than war"? What purpose would students be willing to go to war for? Causes? Other people? What might be a country's motives for going to war? How do they feel about not supporting a government position? This might be a good time to explore how students feel about the lack of support for the Vietnam War. Many high school students are confused about what a patriotic response is in time of war. For students approaching draft age they are particularly sensitive to the notion of fighting in a war that citizens do not support.

Activity 15: Patriotism, Courage and War

There has been, for many years, a strong link between war and feelings of patriotism. Patriotism, that love of country, has been used by nation-states, as they built up their war machinery, to insure public support for what would inevitably become an arduous operation. People who opposed the war, even an unpopular one, have been criticized, debased, even jailed. Terms such as un-American were thrown at war protesters. What does the following song tell you about patriotism?

Remember the Alamo
by Jane Bowers

One hundred and eighty were challenged by Travis[1] to die,
On a line that he drew with his sword when the battle was nigh:
"The men who fould fight to the death, cross over, but him that would live
better fly."

And over his line went a hundred and seventy nine.

CHORUS:
Hi-ah, Santa Anna,[2] we're killing your soldiers below
So the rest of Texas will know, and remember the Alamo.

When Bowie[3] lay dying, his powder was ready and dry
From flat on his back, killed him a few in reply.
And young Davy Crockett[3] was smiling and laughing, the challenge was fierce
in his eye.

For Texas and freedom: a man more than willing to die.

CHORUS

The courier sent to the battlements, bloody and loud,
With words of farewell and the letters he carried were proud:
"Grieve not, little darling, my dying; if Texas is sovereign free,
We'll never surrender, and ever will liberty be."

CHORUS

Connections:

If the music for this song is available (for instance on the album "Kingston Trio at Large"), the driving rhythm of the piece underscores the words of the song. There is a particular conception of bravery and patriotism suggested by this song. As students examine the song, they may wish to consider their own thoughts about patriotism and war. How would it have been to have been the 180th man who did not "cross over"? Can patriotism and willingness to go to war be seen as phenomena of group pressure?

How does one decide whether to go to war? What is patriotism? When is it patriotic to question your government's policies? Is it patriotic to challenge those policies? Is it ever patriotic to reject those policies? When is it unpatriotic to question challenge, or reject your government's policies? How do you decide?

Ask students to consider the words of Camus: "I should like to be able to love my country and still love justice." As students consider this statement, they are urged to consider what patriotism means to them. Can they separate in their minds the country from the specific policies and policy makers of the country? Encourage students to develop a working definition of patriotism.

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1. Travis was commander of the American troops at the Alamo, Texas.

2. Santa Anna was commander for the Mexicans who tried to retake the Alamo.

3. Bowie and Davy Crockett were frontier heroes reputed to fight at the Alamo.

Activity 16: Readings

"The Goals of the French Revolution"
"Universal Conscription"
"Law of Suspects"
(all quoted in Human Adventure, vol. I, pub. by Harcourt, Brace, pp. 225-8.)

"The Social and Political Significance of War"

The Goals of the Revolution

It is time to mark clearly the aim of the Revolution and the end toward which we wish to move; it is time to take stock of ourselves, of the obstacles which we still face, and of the means which we ought to adopt to attain our objectives...

What is the goal for which we strive? A peaceful enjoyment of liberty and equality, the rule of that eternal justice whose laws are engraved, not upon marble or stone, but in the hearts of all men.

We wish an order of things where all low and cruel passions are enchained by the laws, all beneficent and generous feelings aroused; where ambition is the desire to merit glory and to serve one's fatherland; where distinctions are born only of equality itself; where the citizen is subject to the magistrate, the magistrate to the people, the people to justice; where the nation safeguards the welfare of each individual, and each individual proudly enjoys the prosperity and glory of his fatherland; where all spirits are enlarged by the constant exchange of republican sentiments and by the need of earning the respect of a great people; where the arts are the adornment of liberty, which ennobles them; and where commerce is the source of public wealth, not simply of monstrous opulence for a few families.

--Maximilien Robespierre

Universal Conscription

I. From this moment until that in which our enemies shall have been driven from the territory of the Republic, all Frenchmen are permanently requisitioned for service in the armies.

Young men will go forth to battle; married men will forge weapons and transport munitions; women will make tents and clothing and serve in hospitals; children will make lint from old linen; and old men will be brought to the public squares to arouse the courage of the soldiers, while preaching the unity of the Republic and hatred against kings.

II. Public buildings shall be converted into barracks, public squares into munition workshops...

III. Muskets shall be given exclusively to those who march against the enemy...

IV. Saddle horses are requisitioned to complete the cavalry corps; draught horses other than those employed in agriculture will be used in the artillery and to haul munitions.

V. The Committee of Public Safety is charged to take all measures necessary for the immediate establishment of a special manufactory of arms or all kinds to correspond to the spirit and energy of the French people. It is, in consequence, authorized to set up all the establishments, manufactories, workshops, and laboratories deemed necessary for the accomplishment of this work and requisition throughout the whole Republic the craftsmen and workers that can assist in making this a success...

VIII. The levy shall be general. Unmarried citizens and childless widowers between the ages of eighteen and thirty-five shall be called first. The shall immediately assemble in the headquarters of their district to be daily exercised in the use of arms until the day of their departure...

XIII. In order to gather provisions in sufficient quantity, farmers and managers of national property shall deposit at district headquarters the grain produced from these lands.

The Law of Suspects

I. Immediately upon the publication of the present decree, all suspect people still at liberty within the boundaries of the Republic shall be put under arrest.

II. Those to be considered suspect include:

1. Those who by their conduct, relations, discourse, or writings have shown themselves to be partisans of tyranny...and enemies of liberty...

3. Those who cannot after the manner prescribed by the Law of March 21 give an account of their means of existence and their performance of civic duties.

4. Those to whom certificates of civism (good citizenship) have been refused.

5. Public functionaries whom the National Convention...(has) suspended or dismissed and not reinstated...

6. Those among the former nobles, together with the husbands, wives, fathers, mothers, sons, daughters, brothers, sisters, and agents of (emigrants) who have not steadfastly manifested their attachment to the Revolution.

7. Those who have emigrated during the period dating from July 1, 1789, to the publication of the Law of April 8, 1792...

The Social and Political Significance of War

If we wish to understand the significance of war, we cannot confine ourselves to those general platitudes which are usually employed by the peace apostles. War and the possibility of its abolition are at the moment generally discussed. I believe that we can form an opinion whether war is justified or not only if we study it from the points of view of biology, morality and history. It is necessary first of all to look at war from the point of view of natural history. We must enquire into the influence which war has exercised upon the natural development of mankind, and we must ask whether war has promoted the development of the human race and of its civilization.

Whenever we look in nature we find that war is a fundamental law of development. This great truth, which has been recognized in past ages, has been convincingly demonstrated in modern times by Charles Darwin. He proved that nature is ruled by an unceasing struggle for existence, by the right of the stronger, and that this struggle, in its apparent cruelty, brings about a selection, eliminating the weak and the unwholesome. That great naturalist has shown that only those types who possess the most favorable traits survive the struggle for existence...

The law of the struggle for existence applies also to men. While that struggle among animals and plants is a silent tragedy, men struggle consciously and have regulated the struggle by certain rules.

The struggle for existence, which is the cause of all human progress, met with in the daily work of man, in the struggle of ideas, sentiments and wishes, in the struggle of sciences and of achievements. All the treasures of civilization and the very order of society are a result of that struggle. Some things are eliminated in that struggle and others remain. Goethe, who had explored life to its depths, said "To eliminate or to be eliminated -- that is the mainspring of life."

Men possessed of a strong mind and will strive to come to the front. The ambitious endeavor to advance. Individuals compete among themselves... Success in the battle of life leads them on. That is their prize...

Families and tribes are composed of individuals, and States of tribes. The laws which apply to individuals also apply to the societies formed by man.

The relations among nations are dominated by an unceasing struggle for territories, power and predominance, and the question of right is as a rule respected only if its consideration is advantageous. While within a State relations between man and man are regulated by law, no similar force exists in the society of states, for these possess neither a common law nor a supreme central power which adjusts their differences. Hence, if irreconcilable differences arise between nations, the decision must be left to war, which alone can prevent wrong and can furnish a nation possessed of great vitality with the necessities of existence.

If men and States acted absolutely unselfishly, war would be avoidable. That is a condition which can neither be expected nor be hoped for. Hence war is unavoidable.

It may, of course, happen that biologically weak nations combine, form a majority and vanquish a nation of greater vitality. However, history teaches that their success will be only temporary. Greater vitality will assert itself, and the united opponents will decline by abusing their victory. Hence the strong nation renews its strength after a temporary defeat and thus secures the ultimate victory...

It cannot be denied that war frequently destroys the strongest vital elements of a nation. On the other hand a victorious nation conquers for itself better conditions of life and thus makes up for its loss...

The biological importance of war is due to the progressive development of humanity. It is evident that its mental and moral force gives the victory to a nation. That force can be found only among people possessed of a strong vitality and of a progressive civilization. Progress makes for victory. If it were not for war, we should probably find that inferior and degenerated races would overcome healthy and youthful ones by their wealth and their numbers. The...importance of war lies in...that it causes selection, and thus war becomes a biological necessity. It becomes an indispensable regulator, because without war, there could neither be racial nor cultural progress.

History shows that war is a powerful instrument of civilization, and that all great crises of civilization have been decided by means of arms.

If we imagine a total absence of war in the past, it is clear that mankind would have stood still, or would have morally and mentally degenerated. As wars were necessary for human progress in the past, we may conclude that they will also be necessary to progress in the future.

Connections:

These four readings are particularly relevant for students in European history courses although the theme of universal conscription and patriotism is useful for all students. Students should refer to sections on propaganda and determining the enemy to help them understand these readings and why it is possible to participate in war. How does thinking of the enemy as a different species enable us to fight them? How does dehumanization such as racism operate?

Activity 17: Poetry

Voluntaries III
-- R. W. Emerson

(reprinted from Poems of Emerson, Houghton-Mifflin, p. 207.)

In an age of fops and toys,
Wanting wisdom, void of right,
Who shall nerve heroic boys
To hazard all in Freedom's fight --
Break sharply off their jolly games,
Forsake their comrades gay
And quit proud homes and youthful dames
For famine, toil, and fray?
Yet on the nimble air benign
Speed nimbler messages,
That waft the breath of grace divine
To hearts in sloth and ease.
So nigh is grandeur to our dust,
So near is God to man,
When duty whispers low, Thou must,
The youth replies, I can.

You and You
--Edith Wharton

To the American Private in the Great War, 1918
(reprinted from Poems of American Patriotism, ed. by B. Matthews, Scribner's, pp. 12-15.)

Every one of you won the war --
You and you and you --
Each one knowing what it was for,
And what was his job to do.

Every one of you won the war,
Obedient, unwearied, unknown,
Dung in the trenches, drift on the shore,
Dust to the world's end blown;
Every one of you, steady and true,
You and you and you --
Down in the pit or up in the blue,
Whether you crawled or sailed or flew,
Whether your closest comrade knew
Or you bore the brunt alone --

All of you, all of you, name after name,
Jones and Robinson, Smith and Brown
You from the piping prairie town,
You from the Fundy fogs that came,
To reach the flaming edge of the dark
Where man in his millions went up like a spark,
You, in you thousands and million coming,
All the sea ploughed with you, all the air humming,
All the land loud with you,
All our hearts proud with you,
All our souls bowed with the awe of your coming!

Where's the Arch high enough,
Lads, to receive you,
Where's the eye dry enough,
Dears, to perceive you,
When at last and at last in your glory you come,
Tramping home?

Everyone of you won the war,
You and you and you --
You that carry an unscathed head,
You that halt with a broken tread,
And oh, most of all, you Dead, you Dead!

Lift up the Gates for these that are last,
That are last in the great Procession,
Let the living pour in, take possession,
Flood back to the city, the ranch, the farm,
The church and the college and mill,
Back to the office, the store, the exchange,
Back to the wife with the babe on her arm,
Back to the mother that waits on the sill,
And the supper that's hot on the range.

And now, when the last of them all are by,
Be the Gates lifted up high
To let those Others in,
Those Others, their brother, that softly tread,
That come so thick, yet take no ground,
That are so many, yet make no sound,
Our Dead, our Dead, our Dead!

O silent and secretly-moving throng,
In your fifty thousand strong,
Coming at dusk when the wreaths have dropt,
And streets are empty, and music stopt,
Silently coming to hearts that wait
Dumb in the door and dumb at the gate,
And hear your step and fly to your call --
Every one of you won the war,
But you, you Dead, most of all!

On a Soldier Fallen in the Philippines

by Wm. Vaughn Moody,
pp. 29-30.

Streets of the roaring town,
Hush for him, hush, be still!
He comes, who was stricken down
Doing the word of our will.
Hush! Let him have his state,
Give him his soldier's crown.
The grists of trade can wait
Their grinding at the mill,
But he cannot wait for his honor, now the trumpet has been blown;
Wreathe pride now for his granite brow, lay love on his breast of stone.

Toll! Let the great bells toll
Till the clashing air is dim.
Did we wrong this parted soul?
We will make up it to him.
Toll! Let him never guess
What work we set him to.
Laurel, laurel, yes;
He did what we bade him do.
Praise, and never a whispered hint but the fight he fought was good;
Never a word that the blood on his sword was his country's own
  heart's-blood.

A flag for the soldier's bier
Who dies that his land may live;
O, banners, banners here,
That he doubt not nor misgive!
That he heed not from the tomb
The evil days draw near
When the nation, robed in gloom,
With its faithless past shall strive.
Let him never dream that his bullet's scream
  went wide of its island mark,
Home to the heart of his darling land where she
  stumbled and sinned in the dark.

from Lay of the Last Minstrel

-- Sir Walter Scott

(reprinted from Bartlett's Familiar Quotations, Blue Ribbon Books, p. 488.)

Breathes there the man with soul so dead
Who never to himself hath said,
  This is my own, my native land!
Whose heart hath ne'er within him burn'd
As home his footsteps he hath turn'd
  From wandering on a foreign strand?
If such there breathe, go, mark him well!
For him no minstrel raptures swell;

High though his titles, proud his name,
Boundless his wealth as wish can claim --
Despite those titles, power, and pelf,
The wretch, concentred all in self,
Living, shall forfeit fair renown,
And, doubly dying, shall go down
To the vile dust from whence he sprung,
Unwept, unhonoured, and unsung.

The Man He Killed

--Thomas Hardy

(reprinted from Where Still Winds Blow, ed. by R. A. Cromie, pub. by McKay, pp. 107-8.)

"Had he and I but met
By some old ancient inn,
We should have sat us down to wet
Right many a nipperkin!

"But ranged as infantry,
And staring face to face,
I shot at him as he at me,
And killed him in his place.

"I shot him dead because--
Because he was my foe,
Just so: my foe of course he was;
That's clear enough; although

"He though he'd 'list, perhaps,
Off-hand-like--just as I--
Was out of work--had sold his traps--
No other reason why.

"Yes; quaint and curious war is!
You shoot a fellow down
You'd treat, if met where any bar is,
Or help to half-a-crown."

The Effect
--Siegfried Sassoon

(reprinted from Where Still Winds Blow, p. 89.)

"The effect of our bombardment was terrific. One man told me he had never seen so many dead before."

-- War Correspondent

"He'd never seen so many dead before."
They sprawled in yellow daylight while he swore
And gasped and lugged his everlasting load
Of bombs along what once had been a road.
"How peaceful are the dead."
Who put that silly gag in some one's head?

"He'd never seen so many dead before."
The lilting words danced up and down his brain,
While corpses jumped and capered in the rain.
No, no; he wouldn't count them any more...

The dead have done with pain;
They've choked; they can't come back to life again.

When Dick was killed last week he looked like that,
Flapping along the fire-step like a fish,
After the blazing crump had knocked him flat...
"How many dead? As many as you wish.
Don't count 'em; they're too many.
Who'll buy my nice fresh corpses, two a penny?"

Dulce Et Decorum Est
--Wilfred Owen

(reprinted from Where Still Winds Blow, p. 98.)

Bent double, like old beggars under sacks,
Knock-kneed, coughing like hags, we cursed through sludge,
Till on the haunting flares we turned our backs
And towards our distant rest began to trudge.
Men marched asleep. Many had lost their boots
But limped on, blood-shod. All went lame; all blind;
Drunk with fatigue; deaf even to the hoots
Of tired, outstripped Five-Nines that dropped behind.

Gas! Gas! Quick, boys!--An ecstasy of fumbling,
Fitting the clumsy helmets just in time,
But someone still was yelling out and stumbling
And flound'ring like a man in fire or lime...
Dim through the misty panes and thick green light,
As under a green sea, I saw him drowning.

In all my dreams, before my helpless sight,
He plunges at me, guttering, choking, drowning.

If in some smothering dreams you too could pace
Behind the wagon that we flung him in,
And watch the white eyes writhing in his face,
His hanging face, like a devil's sick of sin;
If you could hear, at every jolt, the blood
Come gargling from the froth-corrupted lungs
Obscene as cancer, bitter as the cud
Of vile, incurable sores on innocent tongues,--
My friend, you would not tell with such high zest
To children ardent for some desperate glory,
The old lie: Dulce et decorum est
Pro patria mori.[1]

Full Moon

--W. D. Ehrhart

(reprinted from Winning Hearts and Minds, ed. by L. Rottman, pub. by McGraw-Hill, p. 14.)

We were on patrol last night;
And as we moved along,
We came upon one of the enemy.

Strange, in the bright moon
He did not seem an enemy at all.
He had arms and legs, a head...

...and a rifle.
I shot him.

---

[1] "It is sweet and dignified to die for one's country."

I Hate You...

--Sergio

(reprinted from Winning Hearts and Minds, p. 86.)

I hate you
with your yellow wrinkled skin--
and your slanted eyes,
your toothless grins...
Always when the time is wrong;
while friends are moaning
through tight-clenched teeth
and bitter eyes...

I can't stand your children--
cowering or begging--
or staring blankly,
void of any comprehension...
Always when the time is wrong;
while my friends lie suffering
in silence deeper than any pain...

And I despise your men,
Indifferent to my curses--
passive before my kicks and shoves
like shadows...
Always when the time is wrong;
while my friends bite at the air
and press their palms
against the earth...

Why

do you not respond,
resist or fight?
It would make hating you
so very much easier...

Connections:

These poems express many of the concepts previously mentioned -- particularly the necessity of dehumanizing the enemy. As the enemy is seen as like us, a mirror, s/he becomes much harder to kill. Of particular interest is Edith Wharton's poem which unified the disparate ethnic groups of the United States into the unified winning force. It might be interesting for students to speculate on which of the poets whose work they read had ever seen battle. Is there a clear difference in attitude between those who had fought and those who appreciated the results of the war, but from a distance? Why is the perspective different? Does one type of knowledge, first-hand or more distant experience lead to more convincing poetry? Does everything have to be experienced to be understood? Why are the earlier poems less opposed to war? How do these war poems express fundamental human values? How were these values taught?

Students may wish to attempt some personal poetry around the themes of patriotism, devotion, just causes, and war.

CHAPTER V:

NUCLEAR WEAPONS
AND THE
ARMS RACE

BEST COPY AVAILABLE

SALT OUTLAWS ABM's

SOVIET NEW SLBM THREATENS U.S. TRIAD

MIRV SEEN AS POTENTIALLY DESTABILIZING

Headlines such as the above have or could have appeared in America's newspapers. To understand what they say, and the meaning behind them, most young people would need to know far more about the nuclear arms race than they do now. First, of course, it is a matter of defining such terms as "SALT", "MIRV", and "ABM". Of even greater importance is knowing how the arms race started and how it can and does effect each of us.

This is an introduction to the basic terms and ideas needed to understand the arms race and the major issues it raises:

ABM -- Anti-ballistic missile. An ABM is supposed to intercept enemy missiles and destroy them before they can hit their targets. This is similar to shooting a bullet out of the air with another bullet. Soviet development of the ABM's in the late 1960's (see Chapter 6) brought about the first major arms limitation agreement. Each side agreed to stop building missile defense systems, thus saving itself the expense of developing its ABM's and the missiles needed to overwhelm the other country's ABM defense.

Backfire -- U.S. name for the Soviet Tu-26, a supersonic bomber, capable of reaching the U.S. from bases in the Soviet Union, but not capable of returning without refueling in mid-air. At recent disarmament conferences the issue of considering this a strategic weapon (one that could hit the homeland of the other country) or tactical (limited to Europe) weapon caused a great deal of controversy.

B-1 -- American supersonic, intercontinental bomber, designed to replace aging U.S. fleet of B-52's. Its great speed and range would make it an effective weapon in a nuclear war. President Carter thought it was not needed, and cancelled the program. President Reagan subsequently reversed this decision.

B-52 -- Intercontinental bomber first used in the 1950's, and modified and improved many times since then. Carter wanted to arm them with cruise missiles and keep them in service till replaced by the Stealth bomber at the end of the 1980's. Reagan thought they should be replaced with B-1 bombers.

Ballistic Missile -- Term used to identify any missile fired by a rocket that returns to earth in a pre-planned flight pattern. Ballistic missiles are usually armed with a nuclear warhead. Included among the "ballistic missiles" are intercontinental (ICBM), intermediate range (IRBM), air-launched (ALBM), and submarine launched (SLBM).

Civil Defense -- Defense plans for saving lives of citizens in case of disaster including a nuclear attack.

Cruise Missile -- A pilotless aircraft developed in the U.S. that is guided by its own computers. Cruise missiles can fly low enough to escape detection by radar, climb over mountains, skim over forests, and strike targets up to 1,500 miles away. The Soviets fear that cruise missiles could destroy their command and control centers and thus leave the Soviet Union defenseless. Cruise missiles became a major issue at SALT I and II negotiations.

Deterrence -- Term used to describe the ability to strike back after a nuclear attack. Both the U.S. and the U.S.S.R. have the ability to destroy the other country. They do not attack the other, because that country could strike back and cause "unacceptable damage" after absorbing the first strike.

Destabilizing -- Any action by one nation that is likely to increase its ability to destroy the other nation's missiles before they can strike back. Some analysts feel that if either the U.S. or the U.S.S.R. believes the other nation can soon destroy it in a first strike, that nation is likely to attack before that possibility can be realized. Hence the term "destabilizing".

First strike capacity -- The ability to launch an attack on another country without suffering "unacceptable damages" in a second strike or retaliation. If one country has first strike capacity, the other has lost its deterrence, and that situation is highly destabilizing.

fission and fusion weapons -- Fission weapons derive their energy from splitting heavy atoms, such as uranium or plutonium. They are usually referred to as Atomic bombs. Fusion weapons derive their energy from the fusion reaction of light atoms such as hydrogen isotopes. To achieve this reaction it is necessary to create such extreme heat that an atomic bomb is detonated to cause the fusion. Fusion bombs are called thermonuclear, or Hydrogen bombs.

ICBM -- Intercontinental ballistic missile. These are land-based missiles, capable of flying from the U.S. to the U.S.S.R., or the other way around, a distance of some 6,000 miles. The U.S. has upgraded its force of (today) some 1,000 ICBM's, from liquid fuel Atlases in the 1950's, Titan's in the 1960's, to solid fuel Minutemen II in the 1970's, and Minutemen III in the 1980's. The latest American ICBM is the MX, missile experimental. The Soviets have their series of SS (surface to surface) ICBM's, including the SS-18, which carries warheads of 25 megatons.

IRBM -- Intermediate range ballistic missile. Term refers to missiles with nuclear warheads with a range of less than 3,000 miles, also called tactical rather than strategic weapons. Recent controversy has surrounded plans of the United States to deploy its new Pershing IRBM's in Europe in response to Soviets installing its SS-20's in Eastern Europe.

Kiloton -- Explosive power equal to 1,000 tons of TNT. The atomic bomb which instantly killed 70,000 people in Hiroshima supposedly had the explosive power of 14,000 tons of TNT, and thus was a 14 kiloton bomb.

Limited nuclear war -- An exchange between two major nuclear powers, in which each will limit themselves to using only part of their atomic and hydrogen bombs.

Megaton -- Explosive power equal to 1,000,000 tons of TNT, or 1,000 kilotons. The Soviets have exploded 52 megaton bombs, and claim to have bombs of 100 megatons, equal to 7,000 Hiroshima-size bombs.

MIRV -- Multiple independently-retargetable reentry vehicle. New technology enables ICBM's to be fitted with up to 14 warheads; each can be programmed to strike a different target. By installing these independently targeted warheads in its Minuteman missiles in the 1970's, the U.S. vastly increased the number of Soviet targets their missiles could hit. In the late 70's, the Soviets have started catching up by "MIRVing" their SS rockets.

MX -- The term MX stands for "missile experimental". The MX of today is a solid fuel ICBM, a successor to the Minuteman III. President Carter wanted to station 200 of these missiles over 4,000 miles of underground railroad track, continually moving them so the Soviets could not destroy them on a first strike. The idea proved too expensive and politically unacceptable. President Reagan has proposed to install 100 MX's in hardened missile silos.

Nuclear weapon -- A weapon armed with a nuclear warhead, ranging from battlefield or tactical to intercontinental or strategic.

Nuclear freeze -- Proposal for the complete halt of all developing, testing, deployment, etc. of nuclear weapons by both the U.S. and the U.S.S.R.

Neutron bomb -- Nuclear warhead intended as tactical weapon noted for giving an intense but confined burst of radiation.

Pre-emptive strike -- A nuclear attack by one nation, designed to head off an expected strike by another; similar to hitting someone "back" before he hits you "first". A pre-emptive strike might be prompted if one country is afraid that the other is about to get first strike capacity.

SALT I -- Strategic Arms Limitations Talks which led to the SALT I Treaty. These were held in the late '60's and early '70's, and resulted in an agreement not to deploy ABM's, or build new missiles except to replace obsolete missiles. SALT I, however, failed to halt MIRVing of ICBM's, thus putting only a limit on missiles, but not on warheads.

SALT II -- Strategic Arms Limitation Talks, which led to SALT II Treaty. The treaty put limits on numbers of specific types of ICBM's and SLBM's both sides could have, how many warheads on these missiles, how many cruise missiles, and strategic bombers. Treaty took 6-1/2 years to negotiate, and the ratification process in the U.S. was halted after Soviet invasion of Afghanistan.

Second strike -- The ability to retaliate after enemy first strike by causing "unacceptable" damage to attacker.

SLBM -- Submarine launched ballistic missile. Missiles fired from submarines are the main weapons in America's defense. U.S. Polaris, Poseidon and Trident submarines are equipped with as many as 16 missiles, MIRVed with up to ten warheads each, for a total in excess of 4,500 warheads. With present technology U.S. submarines cannot be tracked and sunk while submerged.

Stealth -- Name given to new supersonic American intercontinental bomber, supposedly capable of escaping enemy detection by radar -- should be ready to replace B-52's by 1987. Many argue that with Stealth bombers on the way, there is no need for the B-1 bomber.

Strategic weapons -- Strategic weapons, as opposed to tactical weapons, are designed for intercontinental use and include ICBM's, SLBM's, and bombers such as the B-52.

Tactical weapons -- Tactical weapons are designed for use in a battlefield. Tanks and nuclear artillery were said to be tactical weapons.

Triad -- The concept or idea on which U.S. defense from nuclear attack is supposedly based. One leg of this triad is the ICBM; another, the SLBM; and the third, our strategic bombers. People who believe in this concept think that the U.S. must at all times be able to protect from first strike each of these three legs. Critics of the triad idea believe it is O.K. as long as one of the three legs (such as the SLBM's) cannot be destroyed by enemy first strike.

Warhead -- Part of weapon which explodes. Warheads may be conventional or nuclear.

Window of vulnerability -- Argument that the U.S. over the next few years (1982-85) may be so far behind the Soviet Union that it would be vulnerable to a first strike attack.

Activity 2: Exercises

1. Define each of the terms explained in this chapter.

2. Translate the following nuclear arms talk language into your own language:

   a. By MIRVing their ICBM's, the Soviets are threatening one leg of America's triad.

   b. A nuclear freeze is a poor idea as long as Soviet strategic forces threaten parts of the U.S.'s triad.

   c. The Soviet Union has reasons to fear American strategic forces because they have MIRVed their ICBM's and SLBM's, while building the B-1 and Stealth bombers and putting cruise missiles on their B-52's. This most probably will give the U.S. first strike capacity, and can only be prevented by a pre-emptive strike. Carrying out these plans may lead to a nuclear war.

   d. Those who think the U.S. could win a limited nuclear war probably would rely on such tactical nuclear weapons as IRBM's, cruise missiles, and the neutron bomb.

   e. The SALT I Treaty made progress by eliminating the destabilizing effects of an ABM defense reducing the power of both America's and the Soviet Union's deterrent.

   f. Recent gains by the Soviet Union in their SS-18's could threaten U.S. ICBM's, opening a window of vulnerability which will threaten the ICBM leg of America's triad. Only immediate production of the B-1 and deployment of the MX could prevent the Soviets from obtaining first strike capacity.

3. One of the chief reasons for the arms race's intensity is that actions by either the U.S. or the U.S.S.R. which may seem defensive to the actor are interpreted as aggressive by the other side. Do you agree with this statement?

4. How do you feel when you read technical headlines such as those at the beginning of this chapter?

5. Why do you think arms race language is so complicated?

6. What might be some of the effects of such technical language on the general public?

Activity 3: The Effects of a Nuclear Explosion

When a nuclear weapon is exploded above ground, the first noticeable effect is a blinding flash of intense white light, strong enough to temporarily blind or at least dazzle observers out to many kilometers (miles) distant from the explosion. It looks like the whole sky is brilliantly illuminated. The light is emitted from the surface of the "fireball," a roughly spherical mass of very hot air (the temperature is around 10 million degrees centigrade), and weapon residues expand to a radius depending on the power of the explosion. For a weapon with a yield of 10 to 20 kilotons (the size of the Hiroshima and Nagasaki bombs), the radius was approximately 200 meters, and it took about one second to form. The fireball continues to emit thermal radiation both as light and, mainly, heat. Finally, the thermal radiation dies away as the fireball is cooled and transformed into the mushroom-shaped explosion cloud. By then, about one-third of the explosive energy has been released as heat.

Within and close to the fireball, everything will evaporate or melt. At some distance from the explosion, the two most important effects of thermal radiation will be to cause burns on exposed skin and to ignite fires. Second-degree burns to unprotected skin may occur 3 km. from the explosion, and at 2 km., third-degree burns will be frequent. At less than 2 km., thermal radiation can be expected to kill most people directly exposed to it. Thin fabrics, paper, or dry leaves will catch on fire up to 2 km. from the explosion. Huge firestorms may result and cause further casualties.

Often the most important effect of a nuclear explosion is the blast wave. The air blast carries about half the explosive energy and travels much slower than the various forms of radiation. The arrival of the blast wave is experienced as a sudden and shattering blow, immediately followed by a hurricane-force wind directed outwards from the explosion. These winds may overturn vehicles, telephone poles, and almost all buildings. Within 1.5 km., everything will be picked up and carried along in the winds, hitting objects. People become projectiles. All the primary blast destruction has taken place during a few seconds.

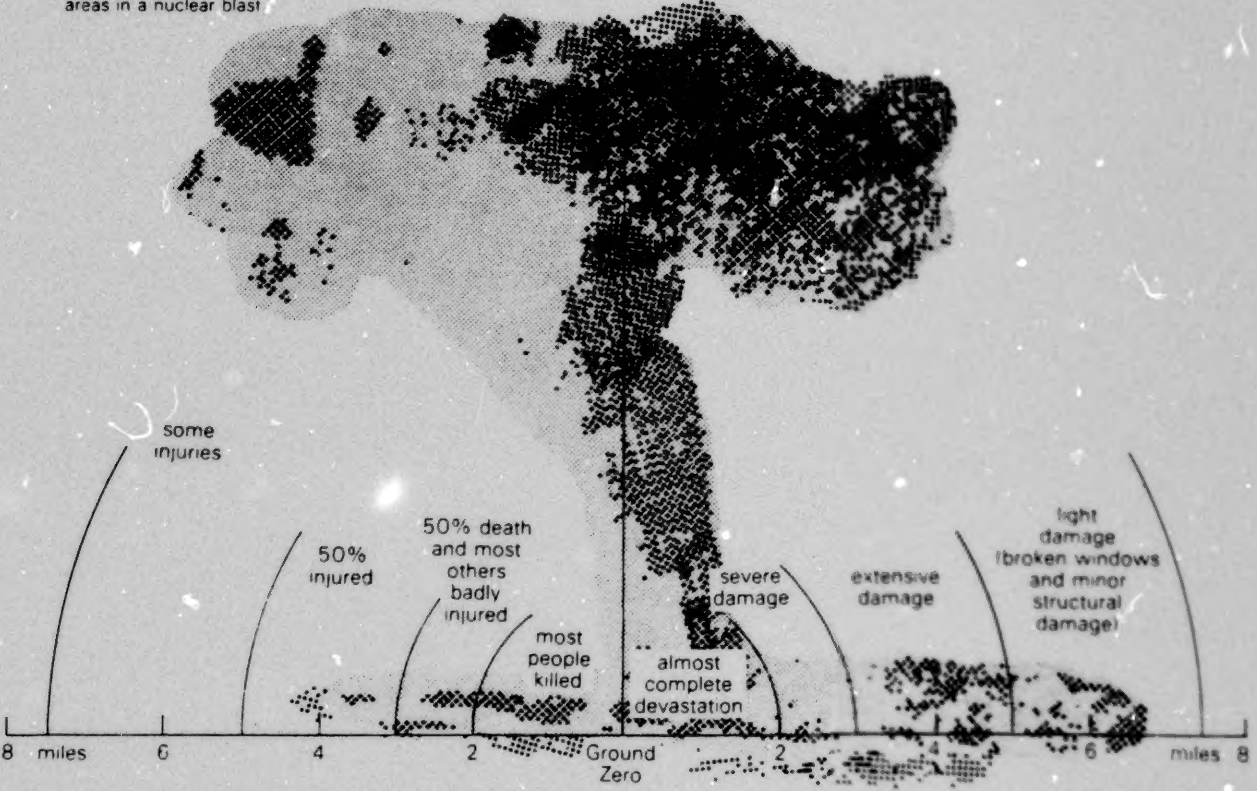
The radiation from a nuclear explosion consists of bursts of neutrons and gamma rays. At a distance of one kilometer, radiation will be fatal or death delayed up to one month. At larger distances, the radiation hazard decreases rapidly, but radiation persists for a long time, up to hundreds of millions of years. The radioactive cloud drifts, changes shape and eventually disintegrates under the motion of the winds. "Late effects" of radiation, in decades to come, may show up as cancers and genetic injuries. When the explosion occurs, thousands of tons of soil are sucked up into the mushroom cloud, and come back to Earth carrying large amounts of radioactivity.

At high doses, radiation causes a person to become unconscious after a few minutes and causes death within a few days. Lower doses will cause ill effects to appear more slowly and less dramatically; death may not come until a few weeks. Acute radiation sickness caused by non-lethal doses could trail off with a state of general weakness over months and years.

Those surviving an acute radiation injury will stand a larger risk than do others of disease with certain forms of cancer. These diseases may occur much later. The same is believed to hold true for genetic or hereditary effects brought about by irradiation of the reproductive organs.

The effects an explosion has depend on many factors. According to one source, the Hiroshima bomb, which was about 13 kilotons (kt) caused the death of 70,000 civilians within a month and some further 80,000 were injured. A larger bomb, 22kt, against Nagasaki gave casualties of 40,000 and 20,000, correspondingly. The reason for the difference is likely due to the topographies of the two cities. Ridges in the land, air currents, different population densities are all factors to be accounted for. The death toll in both cities was still increasing in 1979, although it is not easy to relate cause and effect so many years after the actual atomic bomb explosions.

Diagram showing the extent of damage to surrounding areas in a nuclear blast


some injuries
50% injured
50% death and most others badly injured
most people killed
almost complete devastation
severe damage
extensive damage
light damage (broken windows and minor structural damage)
8 miles
6
4
2
Ground Zero
2
4
6
miles 8

Source Office of Technology Assessment *The Effects of Nuclear War* Croom Helm Ltd London 1980

Activity 4: Inside the Mushroom Cloud

Nuclear weapons are rather small in size. Some of them that fit in a cannon shell are about the size of a breadbox. Others that are carried by planes and can be dropped as bombs are about the size of a refrigerator. So where is all that tremendous energy stored that is released when a nuclear weapon detonates? Where does this energy come from? How fast, and in what form, is it released?

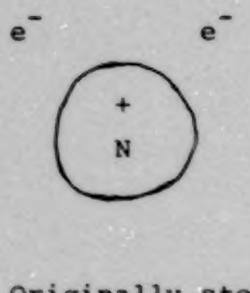
The nuclei of the atom of an element consist of neutrons and protons. The number of protons determines what the element is, and the sum of neutrons and protons determines the element's atomic weight. Neutrons and protons weigh about the same and are each about 2,000 times heavier than the electrons around the nucleus.

For example, the element uranium has atoms with nuclei that contain 92 protons -- that is the definition of uranium -- and 146 neutrons, for a total atomic weight of 238. There are also atoms of uranium with only 143 neutrons in their nuclei for a total atomic weight of 235. This kind of uranium is known as an isotope, that is, a uranium nucleus with the same number of protons but different numbers of neutrons. The scientific notation distinguishes between various isotopes as follows:

We write U^{238}_{92} for ordinary uranium, and U^{235}_{92} for the lighter isotope that was so important to the first uranium nuclear bomb.

The mass of a nucleus is less than the sum of the masses of all the protons and all the neutrons it consists of. The law of conservation of matter tells us that this "missing mass" cannot just simply vanish. Actually, it has transformed itself into energy according to Einstein's famous formula $\underline{E = mc^2}$, where E is energy, $\underline{m}$ is mass, and $\underline{c^2}$ is the speed of light squared. So if the missing mass is $\underline{m}$, the amount of energy it has transformed itself into is $\underline{E = mc^2}$.

An atom



nucleus = center of the atom
+ = proton
N = neutron
e⁻ = electron
proton + neutron = mass

Originally stored as kinetic, or motion, energy of individual nucleons in the heavy, fat nucleus of the plutonium atom, it is given up when the two smaller, tighter fragments form as a result of the splitting of the bigger nucleus. This is what we call, with good reason, nuclear energy.

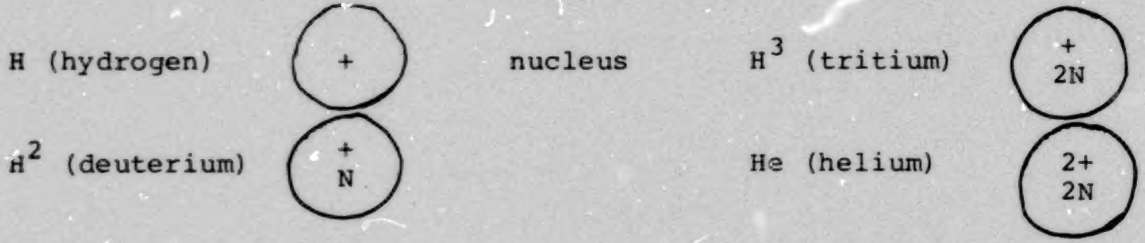
Since the nucleus is held together by what is called "binding energy," a mechanism is needed to provide some extra energy that could break it up. A modestly energetic neutron hitting a uranium or plutonium[*] nucleus would fracture it. It so happens that every time a uranium-235 or plutonium-239 nucleus breaks up into two fragments, it releases, on the average, two neutrons, which have such energies that if they hit another uranium nucleus, they can split it up. This is the basis for the "chain reaction" that makes nuclear weapons possible.

In a real weapon, only a small percentage of the nuclei fission, so realistically, the energy released by a plutonium bomb that contained 20 kilograms (1 kg = 2.2 lbs) of plutonium would release about 10^{12} calories.

The temperature of the sphere of fissioned nuclei at the end of the fission process would be about 130 million degrees centigrade. The pressure released would be tremendous. These are the conditions in the center of the sun: a nuclear detonation is a miniature sun that shines instantaneously on Earth.

How much energy is 10^{12} calories? It is equal to the energy that would be released by the detonation of 2.5 million kilograms, or 2,500 tons, or high explosives.

Energy can also be released in the process of fusing small nuclei into larger ones. For example, hydrogen is the simplest element, having only one proton in its nucleus. Deuterium is an isotope of hydrogen, and its nucleus has one proton and one neutron. Tritium, also a hydrogen isotope, has one proton and two neutrons in its nucleus. Fusing together two deuterium nuclei to get an isotopic helium nucleus and a neutron yields more energy than splitting uranium. In order to fuse, deuterium and tritium nuclei must be squeezed together and superheated for a very brief period of time, measured in microseconds. In an actual weapon, the needed energy is provided by a mass of plutonium (less than 10 kilograms) that is made to fission.



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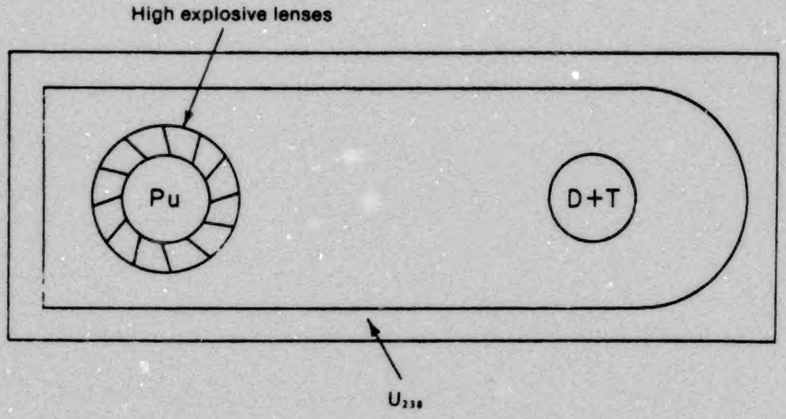
[*] Plutonium (Pu) is an artificial element, made from uranium.

Putting all three together can produce a weapon. What is the physical size of a nuclear weapon, and roughly how much plutonium, deuterium, tritium, and uranium-238 does it contain? A nuclear weapon that would release energy equivalent to the energy produced by the detonation of one million tons of TNT would contain a few kilograms of tritium, some kilograms of plutonium, and about 100 kilograms of uranium-238. That total weight of a one-megaton nuclear weapon would be at most a few hundred kilograms.

A typical nuclear weapon resembles the contraption in the figure below. Energy generated by the splitting of the plutonium nuclei travels down the weapon and fuses the deuterium and tritium by heating it to between 10^7 and 10^8 degrees centigrade. The fission-fusion-fission process is completed in less than a millionth of a second, at the end of which a furiously expanding mass of radioactive nuclear fragments and newly-created helium nuclei, all stripped of their electrons, form a cloud of vaporized matter a few meters in diameter with a temperature of many tens of millions of degrees. This is what is known as the "fireball."

Schematic Representation of a Fission-Fusion-Fission Weapon



(Excerpted from The Bulletin of Atomic Scientists, February 1983.)

Ultimately, the energy released by the fission and fusion processes takes many forms. Some is released as kinetic energy: of the new smaller nuclei created by the fission of the small plutonium trigger and the larger uranium-238 blanket; of the helium nuclei created by the fusion of deuterium and tritium; and of the neutrons that fly away. All the electrons around all of these nuclei are ripped away from them, and they too carry some kinetic energy. But in the case of a large (over 100 kilotons) weapon, the largest fraction of the energy released is in the form of electromagnetic radiation: gamma rays, x-rays, ultraviolet light, visible light and, eventually, infrared radiation.

The fireball is completely transparent to all electromagnetic radiation, so it escapes from the initial fireball and heats up the adjacent layers of undisturbed air. But the x-rays can't go very far because they are absorbed by the air molecules. This heats the air around the original fireball to such a high temperature that in turn it becomes transparent, allowing the radiation to move out and heat up additional layers of air farther away from the expanding fireball. This process removes energy from the interior of the fireball and cools it down uniformly; it also makes the fireball expand and grow at supersonic speed.

As the fireball expands and cools, the radiation that escapes from it changes from x-rays, to visible light, to thermal (infrared) radiation. When the fireball temperature is reduced to about 300,000 centigrade, the speed with which it grows by emitting radiation becomes equal to the speed of sound in the air. At that point, two things happen: First, the superheated weapons debris that travels inside the fireball with supersonic speed catches up with the outer edge of the fireball; and second, a shock wave develops at the outer surface of the fireball that begins to shock-heat the air around the fireball, making it incandescently hot.

Since hot air absorbs visible light, one cannot see the fireball until the gases around it have cooled enough to permit visible light emitted by it to escape. The obscuring of the fireball by the shocked air is the cause of a characteristic "double flash" of light that a nuclear detonation in the air displays. This, incidentally, is the signal by which monitoring satellites detect nuclear weapons tests in the atmosphere.

A megaton-size weapon exploding on the ground will generate a fireball about three miles in diameter before it starts lifting into the atmosphere. Eventually, a cloud develops with a 10,000-meter radius that will rise above 25,000 meters in the air.

There is a very intense burst of neutrons and gamma-rays coming from the fission fragments and the fusion of the light nuclei. Then comes a silent giant wave of intense heat and a flash of light hundreds of times brighter than the sun. A shock wave of very high pressure follows, pushing down on everything with crushing force. This shock wave travels outward from the point of detonation like an ever-expanding ring, slapping down on the ground. It is followed by intense winds that reach speeds of hundreds of miles per hour and die down slowly as the shock wave travels farther and farther away from the point of detonation.

As the fireball rises from a ground explosion, it entrains with it millions of tons of vaporized dirt that cools, condenses and starts falling toward the ground as the winds at the upper level of the atmosphere sweep the huge cloud downwind from the point of detonation. A billion billion billion million (10^{33}) oxygen and nitrogen molecules in the air have been combined by the heat of the blast into nitrogen oxides, which then rise with the cloud to the upper levels of the atmosphere. An even larger number of liberated electrons start spiraling along the lines of the geomagnetic field of the Earth. All these events at the nuclear, atomic, or molecular level give rise to macroscopic phenomena that we generally think of as the physical effects of a nuclear explosion.

Exercises:

1. Compare a fission bomb with a fusion bomb in terms of: elements used, amount of energy released.

2. Why is it that a nuclear explosion can be compared to the sun? How are they similar? How are they different?

3. What is the "fireball"?

4. Give five examples of electromagnetic radiation.

5. What three important events result from thermal radiation released from an atomic explosion?

6. What are the effects of the blast wave?

7. What are some immediate and long-term effects of radiation?

8. What are the symptoms of radiation sickness?

9. Why might a larger bomb cause fewer casualties than a smaller bomb?

10. What precautions might a person take if they knew an atomic bomb were going to explode five miles from their house?

11. If a person survived a nuclear explosion, in what ways might their life be disrupted? Consider the following:

- food supplies
- water supplies
- transportation
- government
- psychological impact
- health care
- law and order

Taken from: Nuclear Weapons, Report of the Secretary-General of the U.N. (Autumn Press, 1980), Chapter IV.
Resources for this section:

The Final Epidemic, edited by Ruth Adams and Susan Cullen.

The Biology of Nuclear War slide show, Carolina Biological Supply Co.

Hiroshima and the Effects of Nuclear War, by Adam Suddaby.

Introduction

Two important assumptions guided the writing of these materials. First, that the history of the Arms Race and the Cold War are as inexplicitly related as the proverbial chicken and egg. It is difficult to determine which preceeded the other, and thus we tell their stories simultaneously. Second, the United States and the Soviet Union share responsibility for beginning and perpetuating the hostilities which have for some time threatened to destroy Planet Earth.

By studying the issues and actions which brought the two superpowers to the state of hostilities we now experience, students should be able to see the interconnection between the Cold War and the Arms Race, as well as the role of fear and suspicion in escalating both. Undoubtedly, they can be helped to understand the dynamics of these dramatic confrontations by, in a sense, reliving some of the more difficult conflicts between the U.S. and the U.S.S.R. through simulations. Two of the events that lend themselves particularly well to role playing are the Yalta Conference and the SALT II negotiations. Other Soviet-American conflicts such as the controversy over the Baruch Plan and the breakup of the World War II alliance could more suitably be played out in classroom debates, both formal and informal. Yet other Cold War issues -- such as deciding to drop the atomic bomb, and continuing to give aid to Chaing Kai-shek after 1949 -- form the basis for class discussions on American policies. In each of these three different kinds of situations, students will learn by doing. The discussion assignment first becomes a way of motivating students to prepare themselves for class. Their understanding is then tested and reinforced by their playing roles as actual participants in making history. By frequently being forced to reverse roles, students will hopefully become sensitized to opposing viewpoints; and by being asked to consider a situation from a third position -- namely that of detached observer or historian -- students gain yet another perspective. In attempting to reconcile the opposing viewpoints they have heard and expressed in class, students are likely to gravitate toward an argument which does not side with either party to the dispute.

Instead, they will begin to see how large a role fear and suspicion plays in perpetuating conflicts -- how one side now does "not know how to advance" and the other does "not know how to retreat".

In encouraging a dialogue on the issues which demands that students use new facts and concepts learned in class, teachers are preparing their students for a vital task. The health of a democratic society depends on the quality of information and degree of freedom enjoyed by its citizens. What better way to prepare young people for their vital roles as co-decision makers in a free society than making them knowledgeable about the important issues of our time, and encouraging them to test their ideas and beliefs in free and challenging dialogue with their peers!

It may be cliche to say it, but the more free, the more open and uninhibited, the better the discussion. Teachers should encourage students to play their roles in class to the hilt -- encouraging challenges of the other's views (not the person holding them). Students can get great joy from using their intellects, and class discussion should be the time to exercise these faculties to their fullest extent possible. Even occasional bursts of real anger may in the long run be more helpful to reaching a meaningful understanding than burying a resentment and letting it smolder unattended. Students need to be encouraged to disassociate personalities from opinions (especially as a good deal of the time people are playing roles they do not believe) so that classroom discussion or simulation is coop:ative and not competitive. A productive way of encouraging this is to have them spend a good deal of time playing different and apparently opposing roles.

Activity 5: The War With Japan

No Warning at Pearl Harbor

For the United States, World War II began on December 7, 1941. That was the day of Japan's unexpected and devastating attack on Pearl Harbor, Hawaii. It was a day, as President Roosevelt said, that "will live in infamy." In one blow, the Japanese destroyed seven battleships and 188 American planes. Over 2,000 American servicemen were killed, and the harbor and bay were left in smoking ruins.

When he launched his surprise attack on Pearl Harbor, Japan's admiral of the fleet was under no allusions. He had been in America, and knew how resourceful Americans were. "We will run wild for six months", Admiral Yamamoto predicted, "but we will have woken the sleeping giant." As Yamamoto anticipated, the United States quickly recovered from the damaging blow at Pearl Harbor. Within six months, the U.S. was fighting its enemies on two separate fronts, Japan in the Pacific theatre, and Germany in the European theatre.

By the Spring of 1945, the once powerful Empire of the Rising Sun was crumbling rapidly. Its German ally was on the verge of defeat; most of Italy was already in allied hands; the Soviet Union had driven German armies off of its soil. By that time, Japan had suffered a steady stream of reverses. First at Coral Sea, then at Midway and at Guadalcanal, the Japanese Navy was defeated. Meanwhile, the Japanese Army was stopped in China and Indochina. Two vast streams of U.S. forces pressed against Japan. One moved from Hawaii to the Marshall Islands, and on to Guam. Another came up through New Guinea. Both converged on the Philippines in December, 1944. In February, 1945, U.S. Marines hit the beaches of Iwo Jima. After three days of fierce fighting, the American flag was raised on that island only three hours by air from Tokyo. On April 1st, the U.S. invaded Okinawa, the last of a series of stepping stones to Japan. Resistance was fierce; the Japanese fought to the last man, and American casualties were the highest of the war. Still, the island fell in June, and the U.S. sank what was left of the Japanese Navy. Preparations were now begun for invading Japan itself, an operation which some military analysts claimed would cost one half million American lives.

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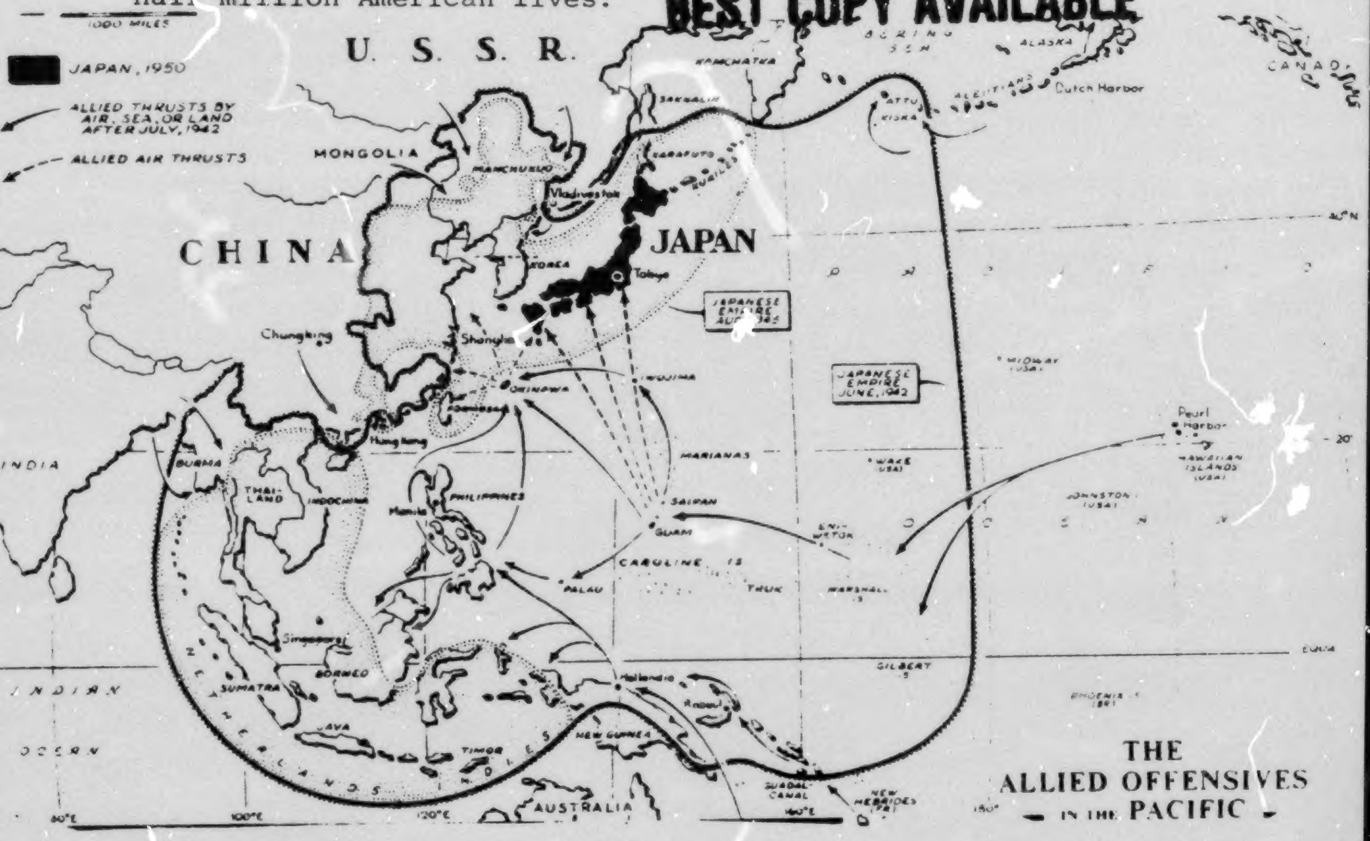
1000 MILES
JAPAN, 1950
ALLIED THRUSTS BY AIR, SEA, OR LAND AFTER JULY, 1942
ALLIED AIR THRUSTS
U. S. S. R.
MONGOLIA
MANCHUKUO
CHINA
JAPAN
KOREA
Vladivostok
SAKHALIN
KAMCHATKA
KARAFUTO
KURILES
BERING SEA
ALASKA
ALEUTIANS
Dutch Harbor
ATTU
KISKA
CANADA
Tokyo
JAPANESE EMPIRE AUG. 1945
JAPANESE EMPIRE JUNE, 1942
Chungking
Shanghai
OKINAWA
IWO JIMA
Hong Kong
FORMOSA
MIDWAY (USA)
Pearl Harbor
HAWAIIAN ISLANDS (USA)
JOHNSTON (USA)
WAKE (USA)
MARIANAS
SAIPAN
GUAM
ENIWETOK
MARSHALL IS
CAROLINE IS
TRUK
PALAU
INDIA
BURMA
THAILAND
INDOCHINA
PHILIPPINES
Manila
Singapore
BORNEO
SUMATRA
JAVA
TIMOR
NEW GUINEA
Hollandia
Rabaul
GILBERT IS
PHOENIX IS
GUADALCANAL
NEW HEBRIDES
AUSTRALIA
NETHERLANDS INDIES
INDIAN OCEAN
PACIFIC
80°E
100°E
120°E
160°E
180°
20°
40°N
EQUATOR

THE ALLIED OFFENSIVES IN THE PACIFIC

After Okinawa, Japan prepared itself for the American invasion. The Japanese planned three lines of defense. The first line consisted of 4,000 Kamikaze pilots, who would commit suicide by crashing their planes loaded with explosives into American ships. Secondly, a wall of gunfire would greet the invaders on the shores. And, finally, human wave attacks were to throw the enemy back into the ocean.

Given the condition of the Japanese economy and military forces, the plans to defend the homeland had little chances of success. By the Spring of 1945, Japan's civilian population had been severly weakened by war-induced shortages. Too many nights had been spent in air raid shelters, and too many days in fruitless labor. There was not enough food in Japan to feed the people. Civilians were eating roots and bark from trees. Potatoes planted to improve the sparse diet were needed to make aviation gasoline. Schoolboys aged 15 and over were drafted into the army. Here they served with their grandfathers. Only one soldier in ten in this makeshift home army had a gun. The others were told to go into the forests, and make bamboo spears for themselves with which to kill the invaders.

Japan lacked raw materials, dependable transportation, and adequate supplies of fuel. Economic life was grounding to a halt. Without its merchant marine, Japan could neither import iron ore for equipping its defenders, or the fuel to fire its furnaces. Japan had virtually no air defense. Production of planes and ships had all but stopped. The Japanese navy had been destroyed in the fierce battles in the Pacific, and its army of five million men was anchored on the Asian mainland, where it could not help to defend the homeland.

The Movement to End the War

Despite Japan's condition, few Japanese dared speak openly against the war. Army intelligence officers had posted spies and informers everywhere. Those who spread "false rumors", let alone suggest Japan was losing, were often severely punished. Even high government officials who opposed the war were murdered by political assasins.

The opponents of the war, however, had a strong ally in the person of Emperor Hirohito. Although formally removed from the decision-making process, the Emperor was able to work effectively behind the scenes. By consulting with many former Prime Ministers, Hirohito learned of Japan's plight. Using his contacts, the Emperor and his allies slowly hatched a peace plan. The Soviets would be approached. If possible, they would be enlisted to fight on Japan's side, or at least remain neutral. If not, they would be asked to help arrange an honorable peace with the United States.

Activity 6: The Yalta Conference (Part I)

The President sat in the middle, with his drawn face and tired eyes. In three months Franklin Roosevelt would be dead, but now he was making one last attempt to resolve the difficult problems separating him and his wartime allies. Winston Churchill, the British bulldog and symbol of his countrymen's determination to win the war and save the peace, sat staring straight ahead. When the bombs were dropping in London in 1940, Churchill worried about the Germans. Now that the war was almost over, he feared the Soviets even more. Their leader, Joseph Stalin, sat next to Roosevelt. The iron man of the Soviet Union could be disarmingly charming. Russia had lost over 15 million killed by Germany during the war. Stalin had vowed that Germany never be allowed to invade the U.S.S.R. again.

The three leaders met at the old summer palaces of the Tsars in the Black Sea resort town, Yalta. The time had come at last when their goal seemed approachable. The German armies were reeling from the hammer blows of Stalin's mighty forces, now only some 44 miles east of the German capital at Berlin. With the war almost over, these three men had to plan with each other how they would make the peace.

The Issues at Yalta

The Yalta Conference was neither the first nor the last wartime meeting of Russia, England, and America. However, it is often viewed as the most important of the many discussions among these leaders. Like at the Versailles Conference of 1919, the decisions made at Yalta would affect the fate and future of millions in Europe and Asia.

What then were the major issues that needed to be resolved at Yalta? The following deserve special attention here:

1. Germany -- There was firm agreement that Germany should never again be allowed to disrupt the peace of the world. Furthermore, all Nazi influence had to be eradicated. Should it then be permanently separated into small and insignificant states? Should it be made to pay for all the damages done to civilian properties? and if so, how much should it pay? and who would get the money?

2. Poland -- The issue here was who would govern Poland? The Polish leaders who fled from their homeland as German and Soviet troops invaded Poland (and were then known as the London Poles because they formed their government-in-exile in England? or those Poles who were communists and loyal to Russia (the Lublin Poles)? A second issue regarding Poland was its boundaries -- The USSR wanted large tracts of land in East Poland and would compensate Poland by giving it large parts of East Germany.

3. Self-government and Eastern Europe -- As the Soviet armies poured through Rumania, Bulgaria, Hungary, and Czeckoslovakia, the question arose who would govern these countries. Would Russia allow them to form governments based on the consent of the people in these lands? A similar issue concerned nations such as Italy, France, and Greece. Would communists be allowed to take part in the government of these countries? And what about their colonies? The unspoken question here was whether England, France, Italy and other nations with colonies would allow the people they ruled to vote and hold office.

4. Japan and the Far East -- Would the U.S.S.R. declare war on Japan after Germany was defeated? If so, would it be given a naval base in China and special privileges in Manchuria in addition to the Kurile Islands and Sahakin Peninsula that lay north of Japan?

5. The United Nations -- Would the countries waging war against Nazi Germany form a world peace-keeping organization similar to the League of Nations? Would the Soviet Union be given 16 votes in this organization, and would every nation in the British Commonwealth (whether or not it was a colony) have its own vote?

6. Aid after the war -- How much longer would the United States provide financial assistance to its allies? As the only nation in the world to emerge from the war in better financial shape than at the beginning, should it continue lend-lease even after the fighting stopped? and if so, to whom -- the Soviet Union? England?

Activity 7: Role Playing Yalta Positions

The situation facing Roosevelt, Churchill, and Stalin, and their different objectives, are presented here to help you prepare your role in a class simulation of the negotiations at Yalta.

The principles of the Atlantic Charter were uppermost in Roosevelt's mind when he arrived at Yalta. He hoped to win Stalin's promise that the Soviet Union would support its principles in Poland and in Eastern Europe. Poland's future was especially important to Roosevelt for two reasons. First, there were six or seven million Polish people living in America who were very concerned with the fate of their homeland. This community represented a sizeable block of votes. Second, Poland would provide the acid test as to whether the United States and the Soviet Union could work together and trust one-another. If the Soviet Union allowed democracy to develop in Poland, the U.S. could trust it to allow similar developments in Bulgaria, Rumania, and other Eastern European nations.

Specific interests -- Roosevelt's military leaders told him he needed Soviet's help in the war against Japan. Without their help the invasion of Japan would cost the United States many hundreds of thousands of American lives. Roosevelt knew that the Soviet Union might demand special privileges and territories in Asia as payment for its help. But he did not want to yield anything against the principles of the Atlantic Charter.

Roosevelt did not want Germany to be saddled with a vengeful peace and staggering reparation bill as after World War I. Germany must eventually be allowed to join the family of nations in the United Nations. In order for that to happen, Germany had to be allowed to maintain a working economic structure.

Finally, while Roosevelt was not opposed to considering a post war loan for the Soviet Union, he would need Congress' approval. Such support would be hard to get if the Soviets failed to live up to American principles or honor their commitments. The Soviet Union had already been given 9.5 billion dollars aid through lend-lease and there were those who thought that we should not support a communist country.

Roosevelt thus looked forward to the Conference to win Stalin's agreement to American ideals and to work for an alliance to keep the peace, after it finished the business of winning the war. To get what he wanted, he would have to create an atmosphere of trust and good will that would later be translated into the work of the United Nations.

Great Britain: Winston Churchill

Background and general outlook -- Located as they were so close to Europe and constantly endangered by its wars, the British came to Yalta concerned primarily with practical political realities. They also had their Empire to think about. Churchill specifically excepted the British Empire from the principles of the Atlantic Charter. As he later expressed it, Churchill was determined not to preside over the down-fall of the British Empire. His most immediate worry, however, was the Soviets. He did not trust them at all, and was determined to keep them as far away from Western Europe as possible. He was prepared to make a deal concerning the territories they already occupied. Thus, he and Stalin had struck a famous bargain in October, 1944. Churchill was willing to allow the Soviets to determine the fate of Bulgaria and Rumania which her troops already occupied, in exchange for British control of Greece and an even division of Hungary and Yugoslavia.

Where there was still a chance of keeping the Soviet Union out of Europe, Churchill was willing to take a strong stand. He had had on many occasions advised America to rush her attack on

Germany in order to beat the Soviets to Berlin, Czechoslovakia, Hungary, etc. In order to have a counterweight against the Soviet Union in Europe, Churchill wanted a strong France. For the same reason he later considered arming Germany again. Long before 1945, Churchill looked beyond Germany's defeat to the task of heading off the Soviet Union's bid for power in Europe and in the Middle East, as well as the Balkan (southern European) states. Especially in Turkey, Greece and Iran, Churchill worried about Soviet influence, penetration and power.

Specific Interests -- England had promised to defend Poland from Germany, but could do no more than offer a home for its leaders when Hitler's armies "blitzed" through Poland. These "London Poles" maintained contact with the Polish underground during the war, and were regarded as Poland's rightful government by the 150,000 Poles who fought in different national armies against Hitler. The London Poles hated the Soviet Union for attacking Poland from the east at the same time Hitler attacked it from the west. Furthermore, they uncovered evidence that 10,000 Polish officers, prisoners of war, were killed by their Soviet captors in the Katyn forest.* Although Churchill sometimes believed the London Poles were not very realistic, he was committed to supporting their claims to govern Poland after the war. He considered Soviet-supported "Lublin Poles" as nothing but puppets and communists.

Churchill was willing to let Roosevelt make his own deal with Stalin to have the Soviet Union fight Japan. He was willing to join the United Nations although he did not share Roosevelt's faith in it. Churchill wanted all nations in the British Commonwealth that were soon to be independent (such as India, Burma, Ceylon and Nigeria) to have votes in the United Nations. He did not consider these countries ready for independence, and therefore insisted they were not covered under the Atlantic Charter. He was ready to concede that because the Soviet Union suffered most from German aggression it was entitled to at least 50% of war reparations. But he was opposed to permanently bleeding Germany with financial obligations to the victors. Nor did he want Germany occupied by the Soviets, except on a very temporary basis. Churchill advocated the need for counterweights to the Soviet Union's power in Europe, and for that reason he wanted France to become a strong country again, Germany weakened but able to defend itself against the Soviet Union, and as little Soviet influence in Western Europe as possible.

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* The USSR not only denied responsibility for the death of these Polish officers, but claimed the charge by the London Poles proved this group collaborated with the Nazis.

The Soviet Union: Joseph Stalin

Background and general outlook -- Stalin and the Soviet people would never forget that Germany had attacked them twice in 27 years, and that a weak and hostile Poland had provided the invasion rout. Furthermore, Stalin and other Soviet leaders believed that the capitalist nations of the world wished to destroy communism. They could point to historic facts to support that belief. France and England had sent troops to the Soviet Union after World War I to try to overthrow the communist government there before it was fully established. The Soviet Union had been barred from joining the League of Nations; America did not establish diplomatic relations with it until 1933. England and France allowed Hitler to take the Sudetenland, and thus move eastward toward the Soviet Union. During the war, the Soviet's allies delayed their attack on Hitler's troops in Europe until June of 1944. Until that time the Soviet Union had to bear the full brunt of his attack. It was the Soviet Union who lost most killed in the war, over 15 million people, and it was the Soviet Union who almost single-handedly freed Rumania, Bulgaria, Hungary and Poland.

Since the Soviet Union viewed the Western, non-communist world as dangerously hostile, it planned to install friendly, communist governments close to its borders.

Reasons other than defense lay behind the Soviet Union's desire to spread communism. Its leaders genuinely believed that capitalism exploited workers and that communism was their own salvation. Those who opposed communism, the Soviet leaders believed, were either capitalists or had been brainwashed by them. Therefore, it might require force in some instances to establish "socialist" governments in Poland and Eastern Europe. Once in place, these governments would take land away from wealthy landowners in order to distribute it among the exploited farmers, put factories in the workers' hands, and replace individual with collective ownership. There might be a temporary opposition to these measures which most likely would be inspired by middle-class "lackeys" of the rich feudal lords and factory owners losing their ill-begotten gains. This opposition would have to be suppressed.

An example of the extent to which "reactionary" (which communists also called "fascist") forces would go to hurt the Soviets was the lies the London Poles spread about the death of Polish officers in the Katyn Forest. It was obviously no coincidence that the London Poles propoganda machine blamed the Soviet Union for this massacre at the same time this charge came from the Nazi's.

Specific interests -- With the war nearly over, the Soviet Union was waiting to reap the fruits of victory. It would establish friendly governments in Eastern Europe, including

Poland, Rumania and Bulgaria. These governments would have to be communist governments. For some time now, the Soviet Union had been working with Polish leaders who could be trusted to rule Poland in the name of the Polish people. This group was known as the "Lublin Poles", and should not be confused with the 'reactionary' "London Poles", completely subservient to England.

The Soviet Union wanted a return of land the Poles had taken from it in 1920 which would also provide a buffer zone in case of another attack by Germany. Poland could be given German territory to make up for its losses. Also, for the purposes of defense, the Soviet Union planned to absorb the small nations on the Baltic Sea; Estonia, Latvia and Lithuania.

Stalin was prepared to negotiate with Roosevelt and Churchill. He would grant these countries the right to "organize" the governments of Italy, Greece, Belgium, etc., if he was given a similar free hand in Eastern Europe. But, if the United States demanded he hold free elections in his areas, he would demand similar freedoms be given to India, Ceylon, Nigeria and other British colonies. Stalin might have reasoned that he had as much right to determine the government of Poland as white Americans had to prevent blacks from voting in Mississippi. He believed, furthermore, that since he did not pretend to dictate how Greece and Belgium were governed, the English and the United States should not dictate how Poland, with whom he shared a common boundary, should be governed. Yet, if he had to, Stalin was prepared to at least pay lip service to the idea of free elections.

Stalin was prepared to help Roosevelt defeat Japan, but for a price. Russia had suffered a defeat by the Japanese in 1905. Here was a chance to recover the territories and the influence it lost as a result of this war. Russia could get back both the Sahakin peninsula and Kurile Islands (located north of Japan). Special rights in Manchuria, access to the trade center, Darien, and a base at Port Arthur were other possibilities. After the heavy losses the Soviet Union suffered in the war against Hitler, it would not wage war with Japan without proper rewards.

Stalin was also willing to join the United Nations in exchange for some assurances Russia not be made a victim by the vast majority of countries opposed to communism. He would therefore demand separate votes for each of the 16 republics in the Union of Soviet Socialist Republics (the USSR). Certainly this was as valid as giving votes to England's colonies.

The Soviet Union had suffered terribly during World War II, and wanted help in rebuilding its shattered economy. Hardly a family in all of the U.S.S.R. had not lost a loved one, and the sections invaded by Germany were destitute. Stalin desparately needed help to rebuild his country. Part of the monetary aid the Soviet Union needed could come from Germany which could, the Soviets believed, pay at least $20 billion, and half of that money should go to the Soviet Union. America was the richest nation on Earth and the only one to become wealthier as a result of the war. It could certainly afford to lend the Soviets in the neighborhood of $6 billion at 2-1/4% interest after the war ended, or just continue lend-lease until the Soviet Union recovered.

The Soviets looked upon reparation payments from Germany as a means of punishment and a way to keep it weak. The Soviet Union would have permanent possession of at least a part of Germany to accomplish the same purpose. Other parts could be distributed among the allies, or allowed to exist as small and weak independent states.

Marshal Stalin felt that he was in good position to get what he wanted at the Yalta Conference. His armies were only some 40 miles from Germany's capital, Berlin. The Soviets had already swept the Germans out of Poland, Rumania, Bulgaria and Hungary. The British and American armies were just crossing the Rhine River on Germany's western boundaries. They were in no position to stop the Soviet Union. Besides, Roosevelt wanted Stalin's cooperation in the United Nations and help against Japan. While the Soviets could take most of what they wanted, they could also make the United States pay a good price for what it desired from the USSR.

Activity 8: Exercises

1. Identify and briefly explain the relevance to the chapter of:
   a. Franklin Roosevelt, Winston Churchill, Joseph Stalin
   b. Atlantic Charter
   c. Germany and reparations
   d. Lublin and London Poles
   e. Katyn Forest massacre
   f. Eastern Europe and British colonies
   g. Darien and Kurile Islands
   h. votes in the United Nations
   i. loans and land-lease
   j. balance of power and France
   k. Stalin's October bargain with Churchill
   l. buffer states

2. What is your sense of how democracy and communism compare as political systems? Is there any detectable bias in the presentation here about these two systems? Does this reading seem to support one system more than the other?

3. In the reading it states "Reasons other than defense lay behind the Soviet Union's desire to spread communism." Do you think there are motivations other than defense behind America's positions and actions?

4. Argue the case for one of the three countries at Yalta. First, re-read the case for that country, and then select one of the positions from each of the issues stated below. To do a good job you should understand that country's general outlook, as well as its positions on specific issues.

Activity 9: The Yalta Conference (Part II)

Proposed Solutions on the Yalta Conference Agenda

1. Germany
   a. Germany should be permanently divided into four or five minor countries, and pay the Soviet Union $10 billion in reparations.
   b. Germany would be temporarily divided into four occupation zones, with one each for the Soviet Union, France, England and America. It should be reunited after reparations are paid and Nazi war criminals are punished.
   c. Same as "b", but with no occupation zone for France.

2. Poland
   a. The "Lublin" Poles will be allowed to organize the Polish government and decide who they will allow to hold office.
   b. The "London" Poles will return to Poland and immediately prepare to hold free elections, allowing all groups to participate.
   c. Free elections in Poland will be held under the supervision of American, British and Soviet observers -- all Poles except those who worked for the Nazis may vote and hold office.

3. Self-government and Eastern Europe
   a. Soviet Union will form the governments of Bulgaria, Rumania, Hungary, etc. These governments will bring about a more equal distribution of wealth among the people and insure close and friendly relations with the Soviet Union.
   b. Each liberated area in Europe, Asia or Africa will be governed in a manner best suited for the people living there, as determined by their liberators.
   c. Free elections under the United Nations supervision will be held in all nations once conquered by Germany or Japan, including Rumania, Bulgaria, Indochina and the Philippines.
   d. Free elections under the United Nations will be held in all Eastern European nations, but not in colonies such as India, considered not ready for self-government.

4. Japan and the Far East
   a. The Soviet Union will declare war on Japan if and when it decides it is in the national interest.
   b. The Soviet Union will declare war against Japan within three months after Germany surrenders. After Japan's defeat, the Soviet Union will be givern certain rights in Manchuria, a base at Port Arthur, and Sahakin and the Kurile Islands.
   c. The Soviet Union will declare war on Japan within one month after Germany surrenders.

5. The United Nations
   a. The Soviet Union will cooperate in establishing and participating in a world organization to ensure peace in the world, and will get 16 votes, one for each of its "Republics".
   b. The Soviet Union will cooperate in establishing and participating in a world organization to ensure peace and will have a single vote.
   c. The Soviet Union will have no more votes in the United Nations than the total votes given England and its colonies.

6. Aid After the War
   a. The United States will lend the Soviet Union $6 billion at 2% interest immediately after the war and grant similar aid to England, depending on its needs. All money lent under the lend-lease program neet not be repaid.
   b. The United States will lend England whatever amount it needs, and lend the Soviet Union $6 billion at 2-3/8%. This loan will only be made if the Soviet Union upholds the principles of the Atlantic Charter in Poland and Eastern Europe.
   c. The Soviet Union and Great Britain agree to repay the United States at least half of the amount lent under lend-lease. It is understood that the Soviet Union was advanced $9.5 billion.

Activity 10: Exercises

1. Compare the agreement reached by members of your class to the results of the deliberations at Yalta, February 4-11, 1945. Try to account for the major similarities and differences.

2. Historians as well as contemporaries have long argued over the Yalta agreements. Some have considered it appeasement of the Soviet Union, similar to the Munich accord. Others have thought the U.S. did as well as could be expected, and some thought it a diplomatic triumph for the United States.

Read the three statements below, explaining each of these different schools of thought and how you feel about each.

a. Like Munich, Yalta was an example of appeasement. The United States gave far too much to the Soviets in exchange for nothing but empty promises.

b. Considering the situation at the time, the United States did as well as could be expected. It did not give up anythng to the Soviet Union that Stalin could not have taken anyway.

c. The Yalta agreement was a diplomatic success for the United States. America achieved its major objectives without surrendering anything important to the Soviets that they did not have already.

Connections

This lesson focuses on the issues considered at the Yalta and the Potsdam Conferences in 1945. The key element of this lesson is a role-play involving delegations from the United States, Soviet Union, and Great Britain. The materials include background information, a review of the issues, and the "weltanshaung" of each country.

Students should be prepared in advance for this simulation, with a brief explanation of activity and an assigned country. Begin class on the day of the simulation, with each student seated with his/her delegation. Students should review issues with the teacher, elect a "leader", and help each other understand their country's position on each of the issues. They should plan a negotiation strategy, and then send about 1/3 of their delegation to each of the other two countries. Negotiations should take place in this manner for about 25 minutes -- with teaching moving from group to group in order to stimulate discussion and assure full participation. While students will try to make deals, they have to check it out with Churchill, Roosevelt, or Stalin before they can complete one. After 25 minutes, students should return to their own delegate's headquarters, discuss the best offer they could get, and make final preparation for a deal. Teacher may now ask for agreement on the issues -- or send the leader of each delegation out of the room with a trusted aide. While they haggle on a final agreement, teacher can explain how the issues were resolved in 1945.

Generally, students outside of the room end up negotiating a very similar deal to the one that was agreed to at Yalta. A follow-up exercise of some value is to have students read what historians have written on the Yalta Conference and then decide whether it was appeasement, about as could as could be expected, or a diplomatic triumph. The entire lesson could be done in one day, but it would be far better to spend two, or maybe as many as three.

This information may be given to students after negotiations.

The Yalta meeting was only one of several war time conferences involving the United States, the Soviet Union, and the United Kingdom. Many of the issues discussed at Yalta have been raised in other conferences, and a number were not resolved until subsequent meetings. The summaries given here will emphasize how rather than where the issues were resolved.

1. Germany

There was agreement on a temporary occupation and division of Germany. Prior to the Yalta meeting, an agreement had been reached to divide Germany into three zones for occupation with one zone for the Soviet Union, England and America. Berlin, the capital of Germany, was in the Soviet zone and also divided between the Soviet Union, England and America. The Soviets later agreed that France also could have a zone, but that it would have to come from those given to the United States and Great Britain. Identical agreements were made for Austria and its capital, Vienna. The occupation in both cases was to continue only until all aspects of Nazi influence were eliminated. Furthermore, Germany was to pay its conquerors somewhere in the neighborhood of $20 billion in reparations, half of which would go to the Soviet Union. The conquerors were permitted to remove iron and coal as well as railroad cars and machinery from Germany as part of this payment. But Germany was permitted to retain enough to allow its people a minimum standard of living.

The actual government of each of the four sectors would be by the occupying power. But all general laws and policies would be made by a Council consisting of representatives from the Soviet Union, England, America and France. The council would have the added responsibility of drawing up plans for the permanent separation of certain territories from Germany, and the eventual unification of the remainder.*

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* As relations between the Soviet Union and its World War II allies became worse after 1945, the Council had increasing difficulties in reaching agreement. Eventually, the Soviet zone became East Germany, and the Western zones were combined into West Germany.

2. Poland

Large parts of Poland were given to the Soviet Union and the Poles were compensated with territory from Germany. In the final agreement covering Poland's government, the Soviets consented to broaden the base of the "Lublin" Poles who they installed, by adding Poles from the country itself and from the "London" group. This group was then to hold free elections under supervision from a commission representing England, America and the Soviet Union. The elections were to be held as soon as possible.

3. Self-Government and Eastern Europe

The Soviet Union promised to support the principles of the Atlantic Charter and apply them in governing Hungary, Rumania, and the rest of Eastern Europe under its control. The development of these countries after the Nazi occupation was ended would be "achieved by processes which will enable the liberated peoples to . . . create democratic institutions of their choice" . . . and to "restore sovereign rights and self government." England, the Soviet Union and America would "consult together on the measures necessary to discharge their joint responsibilities." Nothing was said in the Yalta agreement about England's colonies or those belonging to other nations.

4. Japan and the Far East

The Soviet Union agreed to wage war against Japan within three months after Germany's surrender. In exchange, the Soviet Union would recover territories and concessions wrestled from her by Japan in the Russo-Japanese War, 1904-05. These included the southern part of Sahakin and the adjacent Kurile Islands, internationalizing the port of Darien, and a naval base in Port Arthur. The Soviet Union was also given free rein in accepting surrender from Japanese troops in Manchuria and certain rights in that province. Furthermore, the Soviet Union agreed to recognize the government of Chiang Kai-shek in China and not support the communist revolution against his regime.

5. The United Nations

The Soviet Union agreed to join the U.N. and along with Great Britain, France, the United States and China was given the veto power in the U.N. Security Council. In the U.N. General Assembly, where all other nations were given only one vote, the Soviet Union was given three.

6. Aid After the War

Nothing was said at the Conference concerning a post-war loan. The subject was raised in subsequent talks between the United States and the Soviet Union.

Activity 11: Introduction -- Hiroshima

Hiroshima. Few places evoke such clear images. So massive was the destruction of the single atomic warhead dropped there on August 6, 1945, that a famous mathematician, Jacob Bronowski, urged that all of the international disarmament conferences be held on that site to remind the conferees of what they were about to consider.

Connections:

To begin this section, it is important to define what the word *Hiroshima* means to students. What do they know of the decision to drop the atomic bomb and of the effects of the weapon? Why do they think a study of Hiroshima has been included in the course?

We have found that few topics inspire students to rush to judgment as does the study of Hiroshima. "Should Truman have dropped the bomb?" is the way the question is usually phrased. We have included the topic for quite different reasons, however. To judge the actions of Harry Truman and of his contemporaries seems to lead us to miss the relevance of the event for us today. For Hiroshima stands as the first time in all of history that an atomic bomb was used, and the pressures to use such a weapon in wartime must be understood. An important goal of this chapter is to understand *how* the decision to drop the atomic bomb was reasoned, and not to accept or dismiss this decision because of the moral position on which it is based. Students should be equally encouraged to think about how a similar decision might be reached today.

Although we have included material basic to an understanding of the decision-making process on Hiroshima, we recommend that teachers consult three superior collections of sources for students: *Hiroshima: A Study in Science, Politics, and the Ethics of Man*, by Jonathan Harris, published by Addison-Wesley in the Amherst Project series; and *Hiroshima*, by Fogelman, published by

Activity 12: The Decision to Drop the Atomic Bomb on Hiroshima (adapted from Fogelman, Hiroshima)

The Americans entered World War II as a result of the Japanese air strike on Pearl Harbor, Hawaii in December, 1941, more than two years after the war itself had begun in Europe and in Asia. Although many Americans had wanted to see our forces intervene on the side of England and "free" (non-Nazi) France and the USSR against Germany and Japan (and in fact we had already sent equipment to England), the majority was afraid of such a move. Thus it was not until our forces were directly attacked that we entered the war. At that time, we made a strategic decision to win the European war against Germany before making a full assault on Japan.

American scientists had learned from German scientists who had escaped Hitler that the Germans were planning to develop an atomic bomb to use against the Allies. Albert Einstein was among the scientists who lent his name to a letter to President Franklin D. Roosevelt, urging him to begin research on such a weapon. The result was the "Manhattan Project", a top secret, two billion dollar research and development project to produce the atomic bomb.

The fear among those scientists who knew of both the German and American projects to build an atomic bomb was immense. As one scientist, Phillip Morrison, recalled, "We knew something was going on in London (during the nightly bombing of the city by rockets) and I turned on the radio every night to see if London was still there."

From the outset it was believed that whoever first produced the bomb would win the war. Later, when our troops entered Germany, it was learned that the Germans were not even close to producing an atomic bomb, but by the time Germany had surrendered, we had invested about $2,000,000,000 in our attempt. While there was no danger that the Japanese were producing such a weapon, the prospect of our using one to end the war in the Pacific as soon as possible spurred efforts to successfully explode a test device.

The "Manhattan Project" was carried out in the utmost secrecy. Even the Vice President of the United States, Harry S. Truman, was not told of the project. Elected in November, 1944, he had not even talked to Roosevelt for six weeks in early '45 when FDR was away in Yalta. The implications of the decision not to inform Truman were soon to become apparent, however, because in April, 1945, President Roosevelt died suddenly and unexpectedly, leaving a vice president until then uninformed of a monumental program, to make the final decision about its use. Truman appointed a committee to advise him the choices open to him in the use of the bomb.

Connections :

Students frequently know very little of how the United States entered World War II, who our allies were, how long the war lasted, and why island-hopping was necessary in the Pacific. Teachers may wish to go over some of the background information in more detail with the use of other readings and maps (to measure distances). Students may be asked to speculate on which of the facts presented in the introduction might have some bearing on a decision to use a nuclear weapon (the cost of the Manhattan Project? secrecy involved? attack on Pearl Harbor? etc.).

Activity 13: Setting the Stage

"The Tarawa Killing Ground"
"The Agony of Peleliu" (adapted from Island Fighting, Time-Life)

The Tarawa Killing Ground

Before the U.S. Marines landed on Betio Island in the Tarawa Atoll, intelligence experts concluded -- from photographs of the island's latrines and an estimate of the number of men assigned to each -- that 4,800 Japanese would defend the island. The estimate was off by only 36, but gave no indication of the toughness of the island's fortifications. The Japanese had correctly concluded that the American drive across the Pacific would concentrate on islands with air fields and Betio had a prized 4000 foot airstrip. This they defended with a double-curtain of barbed wire on the beaches, mines and reinforced concrete pillars under water. Pillboxes and emplacements, housing weapons ranging from 13 mm to 8 inch guns, were encased in concrete, reinforced with steel and coconut logs covered with ten feet of crushed coral. The Marines learned indeed that they could take such an island, but only at a staggering price.

U.S. warships and planes dropped 400 tons of bombs on Betio, but the firepower had so little effect that the Japanese guns lobbed accurately sighted shells right on the landing craft. Hence, the Marines concluded, the only way to wipe out the fortifications was to kill the men inside. Flamethrowers and demolition teams were called into action. Correspondent Robert Sherwood wrote of the attack:

"A marine jumped over the sea wall and began throwing blocks of fused TNT into a coconut log pillbox about 15 feet back of the sea wall... Two more marines scaled the sea wall, one of them carrying a twin-cylindered tank strapped to his shoulders, the other holding the nozzle of the flamethrower. As another charge of TNT boomed inside the pillbox...a khaki-clad figure ran out the side entrance. The flamethrower, waiting for him, caught him in its withering stream of intense fire..."

Despite the success of this "corkscrew and blowtorch" method, as it was called, the Marine advance was agonizingly slow. There were easily 500 pillboxes crammed onto the little island, and enemy fire was so heavy at times that it took up to seven hours just to crawl 100 yards.

The U.S. victors at Tarawa paid a terrible price. Of the 12,000 attackers, 1,056 died and 2,292 were wounded. Casualties were so heavy that Navy medics retrieved and treated them on an assembly line basis. One doctor, operating by flashlight in a captured pillbox, patched up 125 Marines in the space of 36 hours.

Once the wounded Americans had been cared for, they were evacuated. But getting them off the island was a major problem. Marines had to pile the patients aboard rubber boats, wade through water under fire, and then transfer the men to waiting Higgins boats.

Some of the Japanese wounded, seeking to avoid the disgrace of being taken alive, pleaded with their comrades to kill them. Many others shot or stabbed themselves -- or blew themselves up with grenades. At least one soldier tried slashing his wrists with a sea shell, but the edge was too dull. When the fighting was finally over, he and 16 other prisoners were the only Japanese still alive on Betio.

The Agony of Peleliu

Tom Lea, a Life Magazine artist, had seen no ground combat before he arrived with the Marines on Peleliu Island in September, 1944. From the moment he stepped ashore, he was confronted with death. "I saw a wounded man near me," he wrote, "His face was half bloody pulp and the mangled shreds of what was left of an arm hung down like a stick, as he bent over in his stumbling shock-crazy walk. My work there consisted of trying to keep from getting killed. I ran slanting up the beach for cover! I fell flat on my face just as I heard the whishhh of a mortar I knew was too close. On the upper edge of the beach, it smashed down four men from our boat. One figure seemed to fly to pieces.

"I do not know what time it was when the counterattack came. I heard in pauses between bursts of fire the high-pitched, screaming yells of the Japs as they charged... I saw the earth, the splintered trees, the men on their bellies all edged against the sky... We found the batallion commander. By him sat his radioman, trying to make contact... There was an infinitely tired and plaintive patience in the radioman's voice as he called, repeating again and again, 'This is Sad Sack calling Charlie Blue, this is Sad Sack...'

"Later, as we passed sick bay, it was crowded with wounded and somehow crushed in the evening light. I noticed a tattered Marine standing quietly, staring stiffly at nothing. His mind had crumbled in battle, his jaw hung... The padre stood by with two canteens and a Bible... He looked very lonely, very close to God, as he bent over the shattered men so far from home. Corpsmen put a poncho, a shirt, a rag, anything handy over the grey faces of the dead and carried them to a line on the beach to await the digging of graves."

Connections:

Graphic details on the war in the Pacific have been added because they, above all, influenced the Army's recommendation to use the atomic bomb. These two selections adapted from the Time-Life book Island Fighting illustrate that the war in the Pacific was one of deadly fighting from island to island against deeply entrenched and deeply committed Japanese soldiers. These materials may be supplemented by Screen News Digest war footage or material from the Amherst Project, Hiroshima. The latter, on pages 60-67, documents the increasing incidence of civilian casualties in World War II, and suggests that American citizens may have become inured to the violence. On pages 2-18, this same book provides further descriptions of the battles as well as a chronology which puts the battles in a wider historical perspective.

As students consider this material, they may be asked to consider the effect such battles might have had on the American public, the soldiers themselves, and their officers.

Comments:

"If I had been an American officer, I would have felt so helpless watching those men land."
-- a 9th grade student

"I know this sounds terrible but it all sounds exciting to me."
-- 10th grader

"It is really hard for me to understand war."
-- 10th grader

"I wonder if the people who fought in actual wars come out with a different feeling about war than people who just read about it."
-- 11th grader

Activity 14: The Testimony

As you learned in the previous reading, when Vice President Harry Truman became President in 1945, he had no idea about the plans to make and use an atomic bomb. The committee he appointed to advise him about this new weapon sifted through lots of information itself before it presented the various options to him.

By early summer, 1945, Truman had decided, on the basis of advice, that if the Japanese did not surrender unconditionally -- that is, if they did not give up the war immediately and without asking for special guarantees for the safety of the Emperor -- he would order the new weapon used. He therefore issued the Potsdam Ultimatum which demanded "unconditional surrender of all Japanese armed forces...(or face the alternative of) prompt and utter destruction." What the "prompt and utter destruction" was to be was not explained. And when the Japanese did not respond within four days, he ordered that "Little Boy," as the bomb was called, be dropped.

The following sort cards represent the advice that Truman actually received or the types of information he probably heard. As you read each one, decide if it suggests that the best approach would be using the new weapon, not using the new weapon, or waiting for more information.

From the Army

In any land invasion of Japan, we estimate 50,000 American casualties and several times that number of Japanese. Their is every reason to believe the Japanese will defend their homeland with the fanaticism of their defense of the Pacific Islands. Even after our victory, we expect guerilla action which could take ten years to subdue.

Public Opinion -- From Newspaper Editorial

Public opinion clamors for a speedy end to the war. The Japanese must be so clearly punished for their sneak attack on Pearly Harbor that they never try such a dispicable act again. We demand unconditional surrender. We will not tolerate that our leaders accept anything else.

From a Political Advisor

From a conference at Potsdam, President Truman issued an ultimatum to the Japanese government to "proclaim now the unconditional surrender of all Japanese armed forces..., the alternative for Japan is prompt and utter destruction." The Japanese have had their warning. They rejected our ultimatum. The fault for what happens is theirs.

From Scientists

"We don't know beans about the military situation in Japan. We don't know whether the Japanese can be caused to surrender by other means. The two overriding considerations are the saving of lives and the effect of our actions on the post-war world. Exploding one of these things as a firecracker over a desert is not likely to be very impressive."

From a Meteorologist

A typhoon is brewing in the Pacific. If we don't land our troops rapidly, many ships will be lost in the typhoon and their senseless deaths will be on our consciences.

From a Political Advisor

Let's not be hasty in our use of the bomb. We know the Japanese have been using mediators like the Swiss and the Russians to find avenues for peace negotiations. In fact, they are talking in Moscow now. Because they officially rejected the Potsdam Ultimatum does not mean that they have really stopped trying to negotiate. Mr. President, with all due respect, your Potsdam Declaration called for unconditional surrender. The Japanese government needs to know what will happen to the Emperor. If we let them know that the Emperor can live, maybe a peace group can negotiate even more.

From a Historian

Whatever is done to Japan has to be seen not only as a means to end the war but also as a warning to the Soviet Union. The Russians have remained neutral throughout this Asian campaign. Now they will enter to gain the spoils. They are already expanding their influence in occupied areas of Europe. We must demonstrate to them the strength, fury, and will of an America whose interests are attacked.

From a Political Analyst

Although we know the Japanese people are defeated, they do not accept the fact. They watch paper balloons take off and float eastward in the wind, confident that these are carrying a terrible retribution to the U.S. They believe the losses of bases on Iwo Jima and Okinawa are part of a grand strategy to lure American forces close to Japan for a fierce counterattack. Most have never been to the U.S. to see the productive capacity of our mammoth assembly line.

From an Army-Air Force Publication

"The entire population of Japan is a proper Military Target... THERE ARE NO CIVILIANS IN JAPAN (because by a new law, all Japanese civilians between the ages of 17 and 40-60 for men -- are now liable for defense duties)."

From a Historian

I think we should make a careful site analysis of Hiroshima. It is the seventh largest city in Japan and an industrial and rail center. So far it has not been subjected to fire bombings.

From a Student of Japanese History

The rejection of the Potsdam Declaration is not a valid reason for using the atomic bomb. We did not specifically tell them what "utter destruction" meant. And we have tied their hands in the matter of unconditional surrender. There is no way they can or will surrender without a guarantee that the Emperor will not be executed. Such a betrayal of the Emperor would be against a thousand years of Japanese tradition.

From a Military Analyst

The war is far from over. The Japanese may be starving at home but they still have hundreds of thousands of troops in Manchouria. American troops must be saved the bloody task of defeating them as well as the island defenders. End the war quickly.

From a Political Advisor

A test of the bomb before some Japanese officials will never work. What if it's a dud?

From a Military Analyst

I believe the Japanese will defend their home islands in case of American invasion by Kamikaze planes. They will sacrifice their entire air force, if necessary, to prevent our landing. One out of four pilots will make a direct hit on a ship. It will be a disaster.

Connections :

These pieces of information may be used as a card sort exercise with each student putting the data in one of three piles -- drop the bomb, don't use the bomb, or more information needed before a decision can be made. Or students may be divided in small groups to work on them together. As students work on the information, they would do well to consider what types of information probably carried the most weight with the new President. Was the information in any way biased toward one position and, if so, why?

Students should be challenged to consider the types of information President Truman did not receive. The second set of cards (which follows this section) may then be used. They should pause to consider why the scientists' petition and naval assessment would not have been heard. For instance, there was tremendous pressure on the military to reach consensus. See Amherst Project, Hiroshima, p. 22:

> Upon Marshall's insistence which also represented MacArthur's view, the Joint Chiefs had prepared plans for landing at Kyushu. King and Leahy (Navy) did not like the idea, but as unanimous decisions were necessary in the Joint Chiefs meetings, they reluctantly acquiesced.

Do you think that this data would in any way have led to a different decision, or were other factors more important? How does decisionmaking appear to be carried out in wartime?

Students may choose to look back at earlier activities involving the definition of the enemy and discussions about saving the lives of those close to them and allowing innocent strangers to die. What kinds of arguments seem to carry weight in wartime? Additional sources on this topic may be found in Amherst Project, Hiroshima, pp. 18-20 (Truman's values of loyalty), and pp. 23-25 (the predisposition to use the available technology rather than to consider this decision in a more careful way than others had been handled). According to Churchill:

> At any rate, there was never a moment's discussion as to whether the atomic bomb should be used or not. To avert a vast, indefinite butchery...at the cost of a few explosions, seemed, after all our toils and perils, a miracle of deliverance... There was unanimous, automatic, unquestioned agreement around our table; nor did I ever hear the slightest suggestion that we should do otherwise.

Again the purpose of this exercise is not to judge Truman's action, but to understand how the decision came about. Would students be satisfied if the decision to use nuclear weapons in a conflict today were carried out by the same process used in World War II? What are the similarities and/or differences they perceive? Churchill's quote (above) provides a provocative basis for such a discussion.

Assessment by Naval Leadership

The enemy is already in a hopeless position and their government knows it. Our forces are securely based in Okinawa; Germany has been defeated. Our ships and submarines operate freely off the Japanese coast. More than 16,000 tons of bombs have ravaged Japanese cities. Food is short because of our blockade of the islands. Japanese productive capacity has been reduced from 20 to 60%.

From Historians

The six man Supreme War Direction Council in Japan was deadlocked on whether to sue for peace. The Emperor himself had called a meeting of the Elders at which he would break the deadlock. He was already lobbying for peace before the bomb dropped.

From Scientists

From three petitions by scientists: Mr. President, we respectfully petition you not to resort to atomic bombs. If they are used, at the very least a clear warning or demonstration should take place first. Our allies should join us in responsibility for to act alone would put the moral burden on us alone. To act alone and in secrecy will diminish the trust other nations may have in our intentions and class us with the Japanese use of sneak attack on Pearl Harbor. We do not use gas warfare, which we call inhuman. Whatever military advantage we may gain by the use of an atomic bomb, will be more than outweighed by political and moral loss in the post-war world.

Comments :

In one class a group of students asked to find the advice favoring the use of the bomb finished the activity early. In response to the teacher's query of whether or not the public would have favored the use of such a bomb had they known the after-effects, the following comments emerged:

> "There's no difference. Killing is killing. You don't think about the enemy as people during wartime."
>
> "Scientists (who knew the effects of the bomb) should have more power over them (the use of their inventions). As soon as the defense department gets ahold of it, it's all over."
>
> "If Roosevelt had lived it would have been different. Wasn't he a liberal?"
>
> "I'm not a Communist or anything, but we have lots of problems here. I wouldn't go to war for my country. I was brought up a Quaker." (In response) "If everyone was like you, we'd be nowhere." (In response) "No, if everyone was like me there wouldn't be any war."
>
> "If other people want our country, there's a reason to defend it."
>
> "We can't only think of ourselves. We have to think of other people."

The last several comments -- in response to a teacher's question about whether the possibility of using nuclear weapons changes the way we solve international problems today -- illustrate the way in which students begin to grapple with the effect of nuclear weapons on decisionmaking.

Activity 15: Secrecy

Top Secret! Confidential! Eyes Only! Classified Information! These are the words stamped on government documents which contain information, plans, and opinions believed to be vital to the national defense. Their publication to people outside the circle of policy makers would, it is felt, jeopardize a nation's security. According to Sissela Bok, "...Every state requires a measure of secrecy in order to defend itself against enemy forces... Ar root of the rationale for military secrecy is the imperative of self preservation."[1]

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[1] Sissela Bok, "The 'top secret' Syndrome," Boston Globe Magazine, February 6, 1983, p. 12.

But, she goes on to wonder, aren't there contradictions in a policy of secrecy, especially in a democracy? According to the First Amendment to the Constitution of the United States, "Congress shall make no law... abridging freedom of speech or the press..." The founding fathers believed an educated citizenry would make better decisions than one from whom the facts were concealed. Finally, she points out areas where excessive secrecy in military planning has caused the failure of a military operation. One notable instance was the rescue mission for the American hostages held in Iran in 1980. Here secrecy was so tight, people who could have given important advice on the project could not be used because of the need to keep the mission known to as few people as possible.

Ms. Bok's concerns about secrecy lead her to consider the planning done for the atomic bomb during World War II. She writes:

> At the outset, the project was surely in legitimate need of secrecy... Nazi Germany was threatening destruction and worldwide takeover... The only possible defense (from Germany's developing an atomic bomb) appeared to be to do so first, and to threaten Germany... In 1945, when Germany finally surrendered, the original justification for continuing with the project had vanished altogether. A number of the scientists who took part in the Los Alamos project have looked back and asked themselves in amazement why they did not at that time reconsider, why they did not leave. Secrecy prevented feedback and criticism from the outside; publicity about the exceptionally important moral decisions affecting the entire world was entirely absent... Secrecy gave the excitement and sense of uniqueness and power, moreover, that led to the continuation of the project.[2]

Connections:

Before reading this selections, students may find helpful a preliminary discussion of secrecy in their own lives. What role do secrets have in their lives? What types of things do students tend to keep secret and why? As they consider a nation's "secrets" they may wonder whether they are like those of an individual. What are the advantages and disadvantages of secrecy? How do they feel when facts are kept from them? How do they think the top-secret nature of the work at Los Alamos affected the decisionmaking process? What is Sissela Bok's point of view? To what extent does it seem valid to them?

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[2] Ibid., pp. 35-36.

An interesting connection for students may be to return to the activities on considering how they get their information on pp. 28-32. To what extent might governmental secrecy affect the information they receive? What reasons would someone in the government give for explaining why some information should be kept secret from the citizenry? How might secrecy be justified? How might it be destructive? Who should decide what information should be kept from the citizens?

Activity 16: The Role of the Scientists

As you learned from the advice President Truman received about the atomic bomb, the scientific community was divided on whether or not to use a nuclear device over Japan. Here are some of the thoughts scientists working on the project remember having at the time.

> Arthur Crompton, a member of the Scientific Panel, remembers the words of a young scientist of draft age who had been persuaded to work at Los Alamos rather than join the Navy: "'I have buddies who have fought through the battle of Iwo Jima. Some of them have been killed, others wounded. We've got to give these men the best weapons we can produce. If one of these men should be killed because we didn't let them use the bombs, I would have failed them.'"[1]
>
> Albert Einstein in 1946: "The American decision may have been a fatal error, for men accustom themselves to thinking a weapon which was used once can be used again. Had we shown other nations the test explosion at Alamagordo, New Mexico, we could have used it as an education for new ideas."[2]
>
> J. Robert Oppenheimer, director of the atomic bomb laboratory at Los Alamos: "But I also think it was a damn good thing that the bomb was developed, that it was recognized . . . that it would have an effect on the course of history... I only regret that it was not done two years earlier. It would have saved a million or more lives."[3]
>
> The technology traps one. The fervor was anti-German. Yet at VE day, no one slowed down. We did not understand the significance of Japan. The machinery caught us.[4]
>
> The pace picked up and everybody worked day and night. It was very hard to stop and think.[5]

Connections: The scientists working at Los Alamos are often thought to have had especial influence on the decision making process because they were so involved with the bomb and could foresee its effects. Yet as these statements suggest, they were divided on the political and moral implications, and--as one scientist states--they had no time to think. Students may wish to explore the scientists' reactions, particularly their justifications based on the future use of the weapon.

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[1] Quoted in Harris, Hiroshima, p. 36.

[2] Ibid, p. 72.

[3] Ibid, p. 73.

[4] From the film, Day After Trinity.

[5] Ibid.

An important correlative film is "The Day After Trinity," a documentary based on the hindsight of Los Alamos scientists. The beauty of scientific research, coupled with the feeling of importance, and the effect of being sheltered from naysayers, had noteworthy effect on their thinking.

The role of the scientists brings up an important dimension in scientific discovery: Who is responsible for the use to which inventions are put? In hindsight, many scientists say they regret not the making of the bomb, but leaving the decisionmaking about its use to others. The scientists were the only ones privy to the effects of the atomic bomb. How might the decisionmaking process have used their specialized knowledge? On the other hand, how much should other decisionmakers rely on the scientists' specialized knowledge? What type of education should scientists receive to enable them to offer advice on the use of their inventions? Should decisions on the use of military technology not be left to either military or scientific experts, because their use raises such fundamental ethical issues? What are some positive ways to decide about the use of military technology?

Activity 17: "Children of Hiroshima" -- slide show

Connections: Students often feel a good deal of despair around the realities of nuclear destruction. Many students need time to reflect on their fear, pain and anxiety about the nuclear threat. This is a good time to do extensive journal writing and sharing.

Some teachers have found it helpful to use techniques from "Empowerment and Despair Workshops" given by Inter Help.

Sharing the pain in community seems to help people experience their sadness and feel supported by their peers and adult role models.

Activity 18: The Bomb and its Effects

President Truman had been told the first atomic bomb would be ready to use by August 1. He subsequently issued orders that this and all other nuclear bombs be used as soon as it was possible. As the clock wound down to midnight for Hiroshima, five days of poor visibility briefly delayed the day for the execution. On August 6, however, the weather was perfect as the first of three planes approached Hiroshima from an altitude of six miles. The Enola Gay released its single bomb close to target, over the center of the city, at 8:15, and immediately turned sharply and upward. The bomb hurtled toward the city where some 240,000 people were just starting their day. The bomb exploded as scheduled at 1850 feet, where it was thought to have its greatest effect.

In the city below the air raid sirens had already sounded the all-clear when a blinding fireball unleased its atomic blast, raising temperatures briefly to one million degrees farhenheit. Within seconds some 50,000 people, mostly civilians, were dead, and fires started spontaneously some two miles away. Altogether 71,379 Japanese were killed or missing, and another 68,023 were seriously injured. Nearly five square miles of the city were reduced to rubble; 80% of Hiroshima's buildings were destroyed. But the horrors visited upon Hiroshima cannot be adequately described by merely listing statistics. The human dimensions of this tragedy are perhaps best depicted by hearing the words of people:

> A first grader, Issaku Watanabe, was walking with a friend to their place of work (at school) at the instant of the explosion. Shocked and numbed they turned in their tracks and started back to Issaku's house. On the way, Issaku's friend died. He himself, face inflated like a grotesque balloon, somehow managed to get home. The only clothes

> left on his body were a tattered pair of underpants; even his shoes had disappeared. By the time he reached home he was trembling all over.
>
> While his mother ran to take him in her arms, he cried, "Don't touch me! Everything hurts so! Just let me sleep." Within the house, the blast had turned everything upside down. Issaku's mother managed to push two sofas together in the guest room, and there the boy lay down for a time. He could feel that the skin on the palms of his hands had by now peeled completely away; he knew that his head was badly burned, his eyes and mouth grossly swollen.
>
> As Mrs. Watanabe stood sadly over him, wondering what she could do for him, he muttered, "Mother, I can't see your face."
>
> "Open your eyes slowly," she said, "Then you'll be able to see me."
>
> . . . by now Issaku's pain had grown much worse. In obvious agony, he writhed on the bed and then threw up. . . .
>
> "What is it?" his mother cried. "What hurts you worst?"
>
> "My arms and legs," he muttered, his words hardly audible.
>
> What was she to do? There was no medicine in the house that would assuage such severe burns. In stricken silence, she sat down beside her suffering son; she was too saddened even to be able to cry. . . . Sometime later, with the help of neighbors, Issaku was put on a wooden trestle and carried to a reception center in the clothing depot. . . . by the time he got to the reception center (he) was running a high temperature. His mother kept putting wet towels on his forehead, but they did no good. He was soon delerious, and at six in the morning he died. . . .[6]

A company employee in his thirties, who was 2000 meters from the bomb's hypocenter when it fell, described to me virtually all of these bodily and genetic concerns in a voice that betrayed considerable anxiety:

> "Even when I have an illness which is not at all serious--as for instance when I had very mild liver trouble--I have fears about its cause. Of course, if it is just an ordinary condition there is nothing to worry about, but if it has a direct connection to radioactivity, then I might

> not be able to expect to recover. At such times I feel myself very delicate . . . This happened two or three years ago. I was working very hard and drinking a great deal of sake at night in connection with business appointments and I also had to make many strenuous trips. So my condition might have been partly related to my using up so much energy in all of these things . . . The whole thing is not fully clear to me . . . But the results of statistical study show that those who were exposed to the bomb are more likely to have illnesses--not only of the liver, but various kinds of new growth, such as cancer or blood diseases. My blood was examined several times but no special changes were discovered . . . When my marriage arrangements were made, we discussed all these things in a direct fashion. Everyone knows that there are some effects, but in my case it was the eleventh year after the bomb, and I discussed my physical condition during all of that time. From that, and also from the fact that I was exposed the the bomb while inside of a building and taken immediately to the suburbs, and then remained quite a while outside the city--judging from all of these facts it was concluded that there was very little to fear concerning my condition. . . . But in general, there is a great concern that people who were exposed to the bomb might become ill five or ten years later or at any time in the future. . . . Also, when my children were born, I found myself worrying about things that ordinary people don't worry about, such as the possibility that they might inherit some terrible disease from me. . . . I heard that that likelihood of our giving birth to deformed children is greater than in the case of ordinary people. . . and at that time my white blood cell count was rather low. . . . I felt fatigue in the summertime and had a blood count done three or four time. . . . I was afraid it could be related to the bomb, and was greatly worried. . . . Then, after the child was born, even though he wasn't a deformed child, I still worried that something might happen to him afterward. . . . With the second child too I was not entirely free of such worries. . . . I am still not sure what might happen and I worry that the effects of radioactivity might be lingering in some way. . . ."

And a young clerk, also exposed about 2000 meters from the hypocenter, but having the additional disadvantage of retaining a keloid scar resulting from facial burns, expresses similar emotions in still stronger fashion:

> "Frankly speaking even now I have fear. . . . Even today people die in the hospitals from A-bomb disease, and when I hear about this I worry that I too might sooner or later have the same thing happen to me. . . . I have

> a special feeling that I am different from ordinary people. . . . that I have the marks of wounds--as if I were a cripple. . . . I imagine a person who has an arm or a leg missing might feel the same way. . . . It is not a matter of lacking something externally, but rather something like a handicap--something mental which does not show--the feeling that I am mentally different from ordinary people . . . so when I hear about people who die from A-bomb disease or who have operations because of this illness, then I feel that I am the same kind of person as they. . . ."

A clerical worker, left with a keloid from her atomic bomb exposure at 1600 meters, has a sense of having been forsaken.

> "I don't like people to use that word (hibakusha). . . . Of course there are some who, through being considered hibakusha, want to receive special coddling (amaeru). . . . But I like to stand up as an individual. When I was younger they used to call us "atomic bomb maidens." . . . More recently they call us hibakusha. . . . I don't like this special view of us. . . . Usually, when people refer to young girls, they will say girls or daughters, or some person's daughter. . . . but to refer to us as atomic bomb maidens is a way of discrimination. . . . It is a way of abandoning us. . . ."

A European priest, one of the relatively few non-Japanese Hibakusha expresses these sentiments greatly but sardonically:

> "I always say--if everyone looks at me because I received the Nobel Prize, that's okay, but if my only virtue is that I was a thousand meters from the atomic bomb center and I'm still alive--I don't want to be famous for that."

Activity 19: A film -- "Drummer Hoff"

Connections: Although the major thrust of studying Hiroshima is the decision-making, many students wish to discuss whether the atomic bomb should have been used, from both military and ethical viewpoints. They wonder if there were realistic alternatives at the time. The question of alternatives is a very important one because it leads to creative thinking about seemingly unsolvable problems. Exploring the risks and possibilities in each position is very important if we wish students to think in a more complex fashion.

The 5-minute long animated movie Drummer Hoff raises the issue of personal responsibility for death in time of war. The film, based on the children's book, lists each of the military figures required for the successful firing of a cannon. The repetition of the word but suggests the soldier who actually fires the shot is liable for the death, yet the general gave the order, the private brought the shot, etc.

Activity 20: A Moral Dilemma of Wartime

Andy Liston was sick of the dirt and hunger and shelling. The boots he was wearing were rotting through and black mud oozed through the holes. How happy he was when he was recalled to battalion headquarters to speak to Major Dewey about a new assignment.

But a shock awaited Andy in that tent so far from the battle lines. He was not going to be in the trenches anymore, but he was to be part of a new war strategy. To open the way for the army's advance in to the steel producing section of England, he was to lead a party which would blow up the three villages along the road. They were known as neutral villages but command worried that they might be hiding some enemy troops or tanks.

For Andy, the assignment was a real problem. He knew those villagers from his camping days and had friends there. He believed no enemy tanks were hidden there. He saw no reason to kill the neutral occupants. "But surprise is crucial," retorted Major Dewey. "If we warn the villagers to leave, the enemy tanks may cut our line. You're a soldier, Liston. Do you duty."

Andy was only a sergeant but hoped for a good future in the army. He knew his buddies were dying in the fields. He knew what disobeying would mean. But he also believed the villagers to be innocent. What should Andy do?

Connections: Students may wish to explore what might happen in war if an individual refused to do his or her job. For those students, the moral dilemma of Andy Liston considers both "duty" and "innocent civilians."

Additional source material on morality and war may be found in Amherst Project, Hiroshima, pp. 68-76, with statements from scientists, soldiers and clergy. Note that in 1943, Pope Pius XII decried the use of unnecessary force in war, saying peace is "moral."

Islanders Returning to Nuclear Test Atoll After an Exile

HONOLULU, April 5 (UPI) — After 33 years of exile because their island was radioactive, the people of Enewetak atoll in the Pacific Ocean are going home.

The official completion of a three-year, $100 million cleanup operation will be celebrated on Enewetak Island next week with a feast of several days. The islanders have been planning it for months.

But much remains to be done to make the islands self-sustaining again, and most of the exiles will return after the feast to Ujelang atoll, 124 miles to the southwest.

In 1947, the people of Enewetak, who numbered only 142 at the time, were resettled in Ujelang to make way for the United States nuclear testing program, which left their islands highly radioactive. The United States Government spelling of their home has since been changed from the more familiar "Eniwetok" because of a petition several years ago by the islanders, contending that the geographers' spelling meant nothing in their language.

The Defense Nuclear Agency, which was in charge of the cleanup, insists it has reduced radioactivity on the atoll to "livable standards." Critics are not so sure.

Acting on the best information available from the Department of Energy and the National Academy of Sciences, the people of Enewetak, now totaling 453, are taking the risk.

A similar program to resettle islanders on the atoll of Bikini, also used to test nuclear weapons, was abandoned in 1978 when it was discovered that food plants were taking up residual radioactivity in the soil and traces of radioactive elements were detected in islanders working on the resettlement.

The cleanup effort on Enewetak included the removal of 6,000 cubic yards of wartime and nuclear test debris and 104,000 cubic yards of contaminated soil from the ring of small islands 2,300 miles southwest of Honolulu.

The Department of Energy set the standards for safety of workers during the cleanup and developed a virtually new technology and standard of precision for the measurement of radiation contamination.

The severest critics, however, contend that the project has jeopardized the future health not only of the Enewetak people, but also of the 4,000 military men who actually did the work.

The General Accounting Office expressed the following skepticism in its review of the project:

"Because it is impossible to reduce radiological contamination on all the islands to pretest levels, living pattern restrictions will have to be imposed on the returning Enewetak people. Even though D.N.A. is accomplishing all the cleanup objectives of the Enewetak Atoll Master Plan, the people could still be overexposed to radiation by knowingly or unintentionally failing to follow recommended living pattern restrictions."

Why have the islanders pressed so hard for cleanup and resettlement, rather than just seeking compensation for their lost land? G.A.O. investigators explained:

"They said that for them to live anywhere else in the world would make them squatters and vagabonds; the land, the atoll, is part of them and they are part of it, in a way which is difficult to describe. When asked why they do not just accept a monetary settlement, they replied that money is not and never can be a substitute for their islands. They said it is against their nature and their custom to sell their land or to take money for it."

The three southern islands of Enewetak, Medren and Japtan were cleaned to a standard that would permit both safe habitation and the growing of subsistence crops.

Radioactivity on the most contaminated islands in the north was to be reduced to a standard that would allow temporary visits. One island, Runit, is the tomb of radioactive waste from the other islands and is permanently off limits.

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CHAPTER VI:

THE COLD WAR

Activity 1: The Plan to Ban Nuclear Weapons

As we have seen, the awesome destructive power unleashed on Hiroshima and Nagasaki raised the threat that similar weapons could end human life on planet earth. Realizing this possibility, President Harry Truman decided to attempt creating a world free from the fear of nuclear annihiliation. The alternative, as he saw it, would be an arms race in which nations would compete with one another in building ever more devastating bombs. But, two questions remained. Should the United States give up its lead in nuclear weapons in the hopes of averting an arms race? And if the United States was willing to make such an offer, would the Soviet Union accept it and cooperate?

Should the U.S. Seek to Ban Nuclear Weapons?

On September 25, 1945, seven weeks after Hiroshima, President Harry Truman met with his cabinet to discuss the question of the international control of atomic energy. He told this select group of advisors that the knowledge of how these nuclear weapons were built could not be kept from the Soviets. Their scientists were bound to learn the secret of the atom bomb. The question the President raised with his advisors was whether the United States should share this knowledge in an atmosphere of trust, or whether the United States should be prepared to continue its lead in nuclear weapons by financing a limitless arms race.

Based on knowledge pieced together from diaries, letters and memories, something similar to the following dialogue took place that day:

Secretary of Agriculture Clinton Anderson: The bomb and the knowledge that produced it is the property of the American people. The people of this country do not want the knowledge of the bomb given away to the Soviets.

Secretary of Commerce Henry Wallace: Did you ask them that?

Anderson: No, but I know it from their other attitudes. The prestige of the president can only be maintained by not disregarding the will of the people. We know, too, that the Soviets are not to be trusted--so why should we give them this most secret weapon?

Director, Office of Scientific Research and Development Vannevar Bush:* The proposal considered does not involve giving away the secrets of the atomic bomb. That secret resides principally in the details of the construction of the bombs themselves.

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*Bush's and Byrnes' statements are based on memorandums they sent to Truman for this meeting.

We cannot keep scientific secrets from the Soviets without keeping them from the major portions of our own scientists.

Secretary of State James Byrnes: It is very well for you to say that scientific knowledge knows no boundaries. But that actually does not apply to Mr. Molotov and Mr. Stalin. They would never allow us to inspect their factories or laboratories producing bombs. Why they won't even allow us in Hungary and Poland. The problem is that we are allowing scientists too much of a say on these matters.

Secretary of War Henry L. Stimson: Whether the Soviet Union gets control of the bomb in four years or in twenty is not as important as to make sure when they do get it they are willing and cooperative partners among the peace-loving nations of the world. . . . And these relations could be irretrievably embittered by the way in which we approach the solution of the bomb with the Soviet Union. For if we fail to approach them now and merely continue to negotiate with them, having this weapon rather prominently on our hips, their suspicions and their distrust of our purposes and motives will increase.

Stimson: My judgement is that the Soviets would be apt to respond sincerely to a direct and forthright approach made by the United States. The chief lesson I have learned in a long life is that the only way to make a man trustworthy is to trust him; and the surest way to make him untrustworthy is to distrust him and show him your distrust.

The Baruch Plan

After his cabinet meeting, President Truman wrote, "the discussion had been lively, and it was this kind of interchange of opinion that I like to see at cabinet meetings." The discussion also prompted Truman to move cautiously in the direction of carrying out Stimson's suggestion.

After extensive consultations with scientists and statesmen; after meetings with allied leaders and partners in nuclear research; and after much speculation and some preliminary criticism at home, the U.S. had a plan for nuclear disarmament and the peaceful development of atomic energy. The plan was carefully drawn up to minimize the chances the Soviets would cheat by secretly making bombs, detecting them if they tried, and severely punishing them if they were caught. It was presented to the United Nations on June 14, 1946 by Bernard Baruch, internationally known financier and advisor to several American presidents. The plan, which bears Baruch's name, proposed establishing an Atomic Development Authority that would:

- mine the uranium and other materials needed to make nuclear weapons

- process and stockpile these materials so no single nation could control a significant amount of the world's supply
- lease and license nuclear materials for carefully-defined, non-military projects such as making electricity
- inspect all nuclear facilities to prevent cheating
- continue research on nuclear energy for further peaceful development.

The functions of the Atomic Development Authority would be phased in on a step by step basis, as follows:

- surveying all existing mines and stockpiles of nuclear materials
- exchanging all scientific information regarding atomic energy
- destroying all existing weapons and turning uranium, etc. over to the Authority
- granting the UN Atomic Development Authority complete freedom to inspect all areas where suspicious activity relating to atomic energy were taking place
- providing that nations caught cheating would be severely punished

What do you think of the Baruch Plan" How do you imagine it was received by the UN? the Soviet Union? Japan?

The Soviet Plan

The Soviet Union regarded the Plan with their customary and deeply-felt suspicions of outsiders in general, and the western, anti-communist world in particular. They were fundamentally opposed to allowing anyone to search through their country. They suspected that the West would use its control over the UN's Atomic Development Authority to prescribe a set of harsh punishments for alleged violations of disarmament agreements. Finally, the USSR did not want a system of inspection that would reveal its military secrets to Americans still armed with nuclear weapons.

Five days after Baruch had presented America's plan for nuclear disarmament, the Soviet Union's Andrei Gromyko rose in the UN to offer his own country's plan. It called for a resolution to be passed by the UN for all nations to:

- pledge themselves not to make nuclear weapons
- destroy all existing nuclear weapons
- pass laws calling for penalties to nations which manufacture nuclear weapons or fail to destroy existing stockpiles

and, finally, the Soviet proposed

- that each of the five member nations of the UN Security Council with the veto, maintain this power over proposed inspections of suspected violations and punishments of violators

In nearly two years of negotiations, the US and USSR were unable to resolve their differences over the question of punishing countries caught cheating on the disarmament agreement. On this issue, the Soviet Union insisted on keeping its veto in the Security Council where it was the only communist nation. On the other hand, the Soviet Union agreed to allow the Atomic Development Authority to inspect its territory, but only after the US gave up its atomic bombs. The US refused to surrender its bombs until after the Soviet Union was inspected.

Despite the relatively narrow gap between their positions, the US and USSR discontinued negotiations on the Baruch-Gromyko plans on May 17, 1948. Sixteen months later, the Soviet Union exploded a nuclear device on which it had been working during these talks.* The nuclear arms race, not even stopped for these or later negotiations, has continued to this day. Now, both the US and the USSR possess enough explosive power to destroy each other many times over. As one thinks about the dangers of nuclear war between these super powers, consider Bernard Baruch's warning:

> Beyond the black portent of the new atomic age lies a hope which seized upon with faith, can work our salvation. If we fail, then we have damned every man to be the slave of Fear. Let us not deceive ourselves: We must elect World Peace or World Destruction.[1]

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*During this same period, the US continued working on weapons development and tested many atomic bombs.

[1] Bernard Baruch, "US Proposal for the International Control of Atomic Energy" in M. David Hoffman, op. cit., pp. 143-144.

Activity 2: Exercises

1. Briefly identify or define and briefly explain the relationship to this chapter of each of the following:

   a. Clinton Anderson, b. Vannevar Bush, c. James Byrnes,
   d. Henry Stimson, e. Bernard Baruch, f. Baruch Plan,
   g. Andrei Gromyko

2. Assume the position of one of the men at Truman's cabinet meeting and back it up with facts and ideas from this and previous chapters.

3. What were the main differences between the US and USSR on disarmament--as expressed in the Baruch Plan and Gromyko counter-proposal? by the time negotiations stopped?

4. Do you think the US should have been willing to rid itself of its nuclear weapons, before inspections of the Soviet Union revealed it had none? Why or why not?

5. Do you think the US should have dropped its insistence that countries cheating on the Baruch Plan should be punished, or do you think the veto power in the UN should be permitted to prohibit punishment?

Connections:

This lesson on the Baruch Plan begins with a debate in Truman's cabinet over offering to share the secrets of the atom with the Soviet, in return for a guarantee that no country will develop a nuclear arsenal. The lesson also describes the Baruch Plan and the Soviet's criticisms, and the arguments surrounding each. Two major issues are raised--first, whether the US should offer to voluntarily surrender its superiority in nuclear weapons; and, second, whether the US proposal went far enough to meet Soviet objections to it.

One effective way to teach this lesson is to have one half of the class write a statement arguing that the US should or should not make the offer, and the other half write papers on the second issue. Students usually need to be assigned to prepare the pro-Soviet position. Teachers should start class by discussing the first question, then placing the major provisions of the Baruch Plan on the board to make sure that all understand it, and then discuss the second question.

This practice in arguing a position can help students create reasoned responses.

Activity 3: The War Time Alliance

Many historians disagree about the reasons behind the hostilities between the United States and the Soviet Union. Some differing views are:

- President Roosevelt did everything he reasonably could to enable the US and USSR to end up as friends once the war was over, and insure an era of cooperation between the superpowers
- The Soviet Union is to blame for the state of hostilities
- The US and allies were at least equally to blame as the Soviets for starting the cold war
- The US was too lenient with the Soviets at Yalta

The following information might help you evaluate which historian you agree with. As you read, you might want to consider how the information itself presents a bias toward one historical viewpoint or another, and what further information, if any, you might need to draw your own conclusions.

Activity 4: The War Time Alliance Collapses

From Collaboration to Confrontation

September 3, 1943 -	Mussolini was overthrown and Italy surrendered to British and American troops. The defense of Northern Italy thus became the responsibility of German armies. The United States and Great Britain began organizing a new Italian government. Despite its repeated objections, the Soviet Union was denied a significant role in Italy's affairs. Under British and American supervision, Italy's communist resistance fighters were disarmed and denied a significant role in Italy's government (although some communists were given cabinet positions). Italy's King was returned to his throne, and the rule of a conservative government was established.

August 1, 1944 - With the Red Army some twenty miles away, the Polish underground began its uprising against the German occupation forces in Warsaw. A German counter-attack drove back a small Soviet attack on the embattled city. The Soviets did not resume their attack on Warsaw for 3 months, while the Germans systematically destroyed the Polish Home Army of some 40,000 men. Not until this force, with its ties to the 'London' anti-communist Poles, was defeated, did the Soviets resume their drive on Warsaw.

October 14, 1944 - Winston Churchill and Joseph Stalin met in Moscow and decided how to divide their respective spheres of influence in the Balkans (Southern Europe). The Soviet Union was to have 90% of the say in Bulgaria and Rumania; Britain was to have 90% in Greece. Hungary and Yugoslavia were to be divided with 50% for each. The United States later denounced the deal and would not allow itself to be bound by it after the war.

December 3, 1944 - Unarmed, communist demonstrators in Athens were shot by Greek soldiers and this began a civil war. Great Britain brought soldiers into Greece to restore order by clearing communist guerilla forces out of Athens. Because of their excellent record in opposing Nazi occupation, the Greek communists were very popular. It took the British six weeks to put the rebellion down. The British then had the King of Greece brought back, and the communists were permitted to vote in subsequent elections. In keeping with the October agreement, the Soviet Union neither issued a formal protest, nor assisted the communist party, which lost the elections.

February 11, 1945 - The Yalta Conference ended. America, Britain and the Soviet Union agreed to divide Germany temporarily, jointly supervise elections in Poland and East Europe, permit the Soviet Union three votes in the United Nations, allow the Soviet Union concessions in Asia in exchange for joining the war against Japan, and use the figure of

$20 billion as the basis for discussion on reparation payments from Germany.

April 12, 1945 - Franklin Roosevelt died in Georgia, and Harry Truman became President of the United States. Truman had not been kept to date on important negotiations with the Soviet Union, and was given a quick, crash course.

April 21, 1945 - The Soviet Union turned administration of Poland over to the 'Lublin' Poles. Four days later, the United States protested that none of the 'London' Poles were offered posts in Poland's government. Stalin replied that the Soviet Union had not interfered in Greece's affairs, and that the US and Great Britain should not interfere in Poland's internal affairs.

April 23, 1945 - In meetings with his advisors, Truman is told of recent lack of cooperation from the Soviet Union in carrying out the Yalta agreements regarding Poland. Truman decided it was time to tell the Soviets that both the letter and the spirit of the Yalta agreements must be honored. When the Soviet ambassador Molotov paid a courtesy visit to Truman on his way to UN meeting, Truman expressed his dissatisfaction in very strong language. Molotov told the President he had never been addressed in that way before. Truman replied that he would not be talked to that way if the Soviet Union carried out her agreements.

April 25, 1945 - At the United Nations organizational meeting in San Fransisco, the Soviet Union failed in its bid to have Poland's 'Lublin' government seated. The United States, however, was successful in seating Argentina's pro-Nazi government over strong Soviet protests.

May 7, 1945 - Germany surrendered. The war in Europe ended. The United States abruptly halted all lend-lease shipments to the Soviet Union. Ships already at sea were ordered to turn back, but the order was withdrawn soon afterwards.

May 18, 1945 - France was given an occupation zone in Germany, Berlin, Austria and Vienna.

May 21, 1945 - Syria and Lebanon broke off their diplomatic relations with France because of its attempts to regain control over them, its former colonies. Within two weeks fighting broke out in Damascus.

July 21, 1945 - In accordance with their Yalta agreement, American and British troops withdrew from a 400 mile front they had occupied at the end of the war. Earlier, General Eisenhower had to restrain General Patton from taking both Berlin, Germany and Prague, Czechoslovakia, in violation of the agreement.

July 17 - August 2, 1945 - The Soviet Union, America, and England conferred at Potsdam, Germany to resolve issues not settled at Yalta. Agreements were reached on German, Polish and Soviet boundaries and occupation of Germany under four-nation commission. The value of German reparations was reduced from $20 billion to what Germany could afford to pay. Soviets were angered by what they considered a reversal of the Yalta agreement.

July 26, 1945 - Ultimatum issued to Japan--surrender immediately or face utter destruction.

August 6, 1945 - Atom bomb dropped on Hiroshima; 70,000 Japanese killed.

August 9, 1945 - Second atomic bomb dropped. Nagasaki destroyed. Soviet Union entered war against Japan.

August 14, 1945 - Japan surrendered. Under Potsdam agreement, The Soviet Union was permitted to occupy North Korea and Manchuria. Americans were determined not to give the Soviet Union a voice in occupation and rehabilitation of Japan.

1945-46 - There was growing realization that agreements on Poland and Eastern Europe were being ignored by the Soviet Union. Stalin even admitted that democratic elections in

Eastern Europe would lead to governments hostile to the Soviet Union. In areas they control, the Soviet Union seized control of banks, railroads, big businesses, and large estates. Soviets excused their use of force in these incidents as necessary to put down 'fascist' and 'bourgeois' (middle class) influence. In these nations freedom of speech, press, and religion as well as trial by jury and the right to oppose the government in power, were prohibited. This was the case in Rumania, Bulgaria, Poland, and the Soviet Union zone of Germany. It was not the case in Soviet Austria, Hungary, or Czechoslovakia.

1945-46 - In western sections of Europe, governments in power allowed opposition parties and protected fundamental freedoms. Communists voted and held office in Italy and France, for example. Between 30-40% of those eligible, voted for communists. Although governments in those countries owned large businesses, like Fiat automobiles, free enterprise was encouraged and no major social reforms to redistribute the wealth were undertaken.

February 9, 1946 - In a widely publicized speech, Marshal Stalin boasted of his Red army's great power and of his people's unwavering support for communism. He proclaimed that capitalism in the West had led to fascism, economic crisis and wars, and made a peaceful international order impossible.

March, 1946 - A popularly elected prime minister and other government officials in Hungary were forced out of office by members of the Communist party.

March 5, 1946 - In a controversial and influential speech, Winston Churchill declared that an 'iron curtain' was descending over Eastern Europe. The Soviet Union, Churchill said, was eradicating the basic freedoms of the millions who lived under her domain. Churchill then proposed an alliance of English-speaking people, to uphold the "principles of the United Nations Charter," and "establish the conditions of "freedom and democracy" as rapidly as possible in all countries."

March, 1946 - Through a Soviet newspaper, Stalin denounced Churchill's 'iron curtain' speech. He called it a "dangerous act calculated to sow seeds of discord among the Allied Governments."

March, 1946 - At a meeting of foreign ministers, the Soviet Union denounced British and American occupation policies in Germany. It accused them of conspiring with ex-Nazis and German businessmen to re-establish the huge trusts that had controlled German industry before and during World War II.

March, 1946 - Iran petitioned the United Nations for withdrawal of Soviet troops. The Soviet Union and Great Britain had occupied Iran to prevent a German occupation during the war. Both powers had agreed to leave Iran by March 2, 1946 at the very latest. The Soviet Union had encouraged Northern Iran to break away and negotiated an agreement with Iran for joint development of Iranian oil. The Soviets promised Iran 49%; traditionally, the British only allowed Iran 20% in their joint oil ventures. The United States supported Iran before the United Nations, thus embarrassing the Soviet Union 'before the court of world opinion'. The Soviet Union finally withdrew from Iran in May. Iran's Senate did not ratify the oil agreement, and the separatist movement in North Iran was suppressed by the Shah.

April 19, 1946 - The United States announced that any long-term loan to the Soviet Union would be dependent on the Soviet Union's international behavior. This announcement ended all hopes for such a loan.

May 3, 1946 - The United States announced that it will no longer allow reparation payments be taken from its zone by the Soviets. The reason given for this decision, was the Soviet Union's consistent refusal to account for the goods it had removed from its zone.

Spring and Summer 1946 - French troops engaged Vietnamese forces under Ho Chi-minh to wrest control of Indochina from his troops. Ho, a communist, had fought against Japan, during the war, and France wanted to regain its pre-war control over Indochina (which included both North and South Vietnam). Meanwhile, British troops attempt to regain control of Indonesia for Holland. Indonesia had been controlled by Holland for centuries and was known as the Dutch East Indies.

June 14, 1946 - Baruch plan for international control of atomic energy was introduced to the United Nations. Five days later, the Soviet Union called for complete nuclear disarmament, but not for inspection. The Baruch (American) plan called for an inspection network, and punishment of violators.

September 12, 1946 - Secretary of Commerce Henry Wallace gave his 'sphere of influence' speech. Wallace is told to repudiate the speech or to resign. He resigned. Several months earlier, Soviet expert George Kennan spelled out his views in an 8,000 word telegram from Moscow. The telegram was said to have a major effect on government policy toward the Soviet Union. In 1953, John Foster Dulles became Secretary of State under President Eisenhower.

Activity 5: Exercises:

1. Identify and explain the relevance to the chapter of:

a. Warsaw uprising, b. precedent set in Italy, c. Churchill's deal with Stalin, d. Greek civil war, e. Harry Truman's meeting with Molotov, f. 'Lublin' Poles, g. lend'lease, h. occupation zones of Germany, i. Syria, Lebanon, Indochina and Indonesia, j. Potsdam, k. differences in occupation and development of nations under Soviet and American control, l. Stalin's speech, m. 'iron curtain', n. Iran, o. long term loan and rehabilitations.

2. People sensitive to the Soviet perspective, as well as the Soviets themselves, have argued that the United States and Britain had really started the Cold War. They blame these nations' actions in establishing basically democratic and friendly governments in the areas they liberated. These actions, the critics say, justified Soviet attempts to insure that governments in Eastern Europe would remain basically friendly to the Soviet Union. This point is also supported with the argument that the Soviet Union has the right to establish friendly countries close to its border, just as the United States would have the right to prevent a hostile government to control Mexico or Canada. Do you agree with either of these arguments? Why or why not?

3. By evaluating the information in this chapter, what information would you use to reach the conclusion that either the United States or the Soviet Union were basically responsible for starting the Cold War?

Connections:

This lesson covers the events beginning with the American and British establishment of a democratic government in Italy without allowing Soviet participation, through the Soviet establishing their 'spheres of influence' in Eastern Europe, and Truman demanding Henry Wallace's resignation for drawing parallels between these incidents, to the advantage of the Soviet Union.*

The major issue raised here is whether the US or the USSR should shoulder the greater share of the responsibility for having initiated the Cold War. Teachers may begin discussion, asking students to respond to the dilemma if the US and UK, by disbarring Communists deny themselves the right to complain that the Soviet Union established communist governments in Eastern Europe without allowing anti-Soviet elements to hold power. After discussing this equation, students tending to lead to a "revisionist" or a "traditional" interpretation of the Cold War's causes. Teachers may wish to focus student attention to such pivotal events such as the Greek Civil War, the Soviet Union's actions in Iran, or France's in Lebanon and Indochina. To assure there are enough differences of opinions to carry a discussion, teachers may ask a few students to argue from a Soviet perspective.

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*At least an equally important issue at the time, was whether Wallace, as Secretary of Commerce, should be making foreign policy statements and claim they represent the views of the President.

Activity 6: War Torn Europe: Economic Collapse and Political Challenge

"There is," the report on President Truman's desk read, "a complete economic, social and political collapse on in Central Europe, the extent of which is unparalleled in history unless one goes back to the collapse of the Roman Empire."[2] Cities had been systematically destroyed, block by block, in the most concentrated and long lasting air attacks known to man. Where once apartments stood, rubble lay everywhere the eye could see in Berlin, Rome, Antwerp, Frankfurt, London, and countless of other cities and towns. Police and fire protection often were simply no longer available; public transportation ceased to function. Water no longer flowed from faucets, and waste products were not carried away by sewage systems. Industries had stopped working. Schools were closed for lack of teachers, buildings, books, and heat. Men and women fainted in the streets from hunger, and children scavanged for firewood, coal, and scraps of food. People burned their own furniture to prevent themselves from freezing.

Europe could no longer support itself. There was no money to open mines, repair railroads, repave streets, rebuild bridges, and restore hope. There was not even enough money in Europe to buy what food it needed to keep its millions from starving.

Possible Solutions

In addition to the billions given through lend-lease, the United States had helped European countries after the war with food and other direct aid channeled through UNRAA (United Nations Relief and Rehabilitation Administration. This aid, adding up to some $10 billion had prevented mass starvation, but had not succeeded in allowing recovery.

By 1947, many Americans felt that Europe had been given enough help, and the United States should do no more than she had already. Others believed that the United States should finance the complete recovery of Europe through a comprehensive plan that could easily cost $13 billion, probably cost around $17 billion, but might cost far more. Others believed that the US should only take direct action by means of threats and force, using its nuclear superiority over the Soviet Union if the Soviets attempted to take military advantage of Western Europe's weakened condition.

Military Pressures on Greece and Turkey

The military balance of power had shifted dramatically in the Soviet Union's favor after World War II ended. In May of 1945, the American army in Europe consisted of some 3,500,000 men organized into 68 divisions and 149 supporting air groups. Ten months later the army was reduced to a scarce 400,000 men and the Air Force had all but been eliminated. By the end of 1949, in marked contrast, the Soviets were estimated to have nearly 4,000,000 men in Europe, and its Eastern European allies close to another 1,000,000.

The Soviet Union with its superior land power allowed itself the diplomatic and political initiatives that easily flow from military strength. The most obvious hemorrhage in the West was Greece. During the war, Britain had helped support the Greek opposition to Nazi control, through the communist dominated ELAS (Greek initials for National People's Liberation Army). At the same time the British worked behind the scenes to provide political support for the far more conservative EDES (Greek initials for the Greek Democratic National League). These conflicting policies could no longer be reconciled when the two Greek organizations fought one another. After the Germans were driven from Greece, the ELAS generally surrendered their weapons and agreed to live under the more conservative EDES. But, fighting broke out in December, 1944 when a generally peaceful ELAS demonstration was attacked. The British then brought troops into Greece to suppress the revolt by the ELAS. A temporary truce was broken in 1946, with the Soviets this time providing help for the communist faction in Greece. Supplies were sent through Yugoslavia.

Meanwhile, the Soviet Union had been putting pressure on Turkey to grant it privileges that had long been the goal of Tsarist Russia. Specifically, the Soviets sought an outlet through the two major straits, the Dardenells and Bosporos, connecting the Black to the Aegean (and thus the Mediterranean) Sea. The Soviet Union's desire for bases in this area was not very different from America's desire to control the Panama Canal. These pressures were accompanied by Soviet demands for Turkey to return provinces in East Turkey that had once belonged to it. With Great Britain's encouragement and material support, Turkey refused to make any concessions to the USSR.

On February 24, 1947, the British ambassador delivered a note to President Truman. The message explained the difficulties England was experiencing in meeting her commitments to both Greece and Turkey. On March 1, the British announced, they would be forced to discontinue supporting these two nations.

Possible Solutions

The issue faced by President Truman and the nation he led, was whether to assume the responsibility to help Greece and Turkey. Isolationists, of course, could argue that the US should not alter its former policies by providing aid and support to these beleaguered countries. On the other hand, they could commit somewhere in the neighborhood of $400 million for economic and military assistance. Or, the US could simply warn the Soviet Union to cease helping the ELAS, and to leave Turkey alone. If the Soviet Union refused, the US could threaten it with nuclear weapons.

The Coup in Czechoslovakia

Since World War II, Czechoslovakia had managed to co-exist with a government dominated but not controlled by communists elected to office. The President of Czechoslovakia was Eduard Benes, the leader of his country at the time of the Munich crisis. The Prime Minister, however, was a communist. In January, 1948, the communists seized complete control of the Czech police department, and in February the non-communist cabinet ministers resigned in protest. Benes, too, resigned on February 25 and two weeks later, Jan Masaryk, Foreign Minister and son of this nation's founder, was found dead on the street, below his open bedroom window. It was not and still is not known whether Masaryk jumped or was pushed to his death. Certainly, the investigation of the Czech police was not believed, but there is no cause to disagree with President Truman's evaluation, "his death was a dramatic symbol of the tragic end of freedom in his nation."[3]

Possible Solutions

Shocked as most Americans were by the news from Czechoslovakia, isolationists could point out there was not much the US could do. Furthermore, Wallace's followers could point out that the Soviet Union was merely 'communizing' their 'sphere of influence', much like America had 'democratized' hers. Those who believed in containment could propose little more, except aid to other nations to assure that what happened in Czechoslovakia would not be repeated elsewhere. Some Americans thought that the US should use its power to free the people of Czechoslovakia--through an invasion force backed with nuclear weapons.

Berlin Blockaded

Not long after the coup in Czechoslovakia, the Soviet Union announced that beginning April 1, she would inspect all shipments to Berlin through her zone. Since the German capital was located in the heart of the Soviet zone, this "inspection" would effect all supplies from the West to the British, French and American sectors of the former capital. Once the Soviets were allowed to stop shipments for inspection, she could easily choke off all trade by slowing traffic to an intolerable snail's pace.

The history of the occupation zones can be quickly summarized. Germany had been divided into four occupation zones, originally intended to be temporary divisions. At the time, the Soviet Union had given only verbal assurances that it would permit allied passage to Berlin. If the United States, Britain, and France intended to insist on unrestricted passage, they would have to base their claims on international laws guaranteeing that right, and not on a specific agreement.

The Berlin blockade was only the last of a series of difficulties the Soviet Union had created in Germany since 1945. Early in the history of the 4 power occupation, the Soviet Union had taken whatever supplies it wanted from East Germany, and then demanded reparation payments from the Western sectors as well. Later, it flooded the Western sectors with inflated currency. The United States and Great Britain retaliated by issuing a new currency for their two zones. When the French agreed, currency reform moved from bi-to tri-zonal cooperation. The Soviet Union interpreted this move to a single currency as the first step in economic unification of Germany. It feared that political unification would soon follow. Indeed, the Soviet Union's demand to 'inspect' goods shipped to Berlin was designed to prevent the integration of West Berlin to West Germany. The Soviet Union soon announced that it would cease demanding inspections, if plans for the tri-zonal currency were scrapped.

Possible Solutions

There was no doubt that President Truman could end this most recent crisis by simply meeting Soviet demands, and there were those who advised he do so. Another possibility, however, was to insist on American rights to passage by flying over the blockade. This would avoid a confrontation on the ground, while maintaining American principles and supplying Berlin. A more confrontive policy was suggested in some quarters. The US could force passage to Berlin with a tank battalion, and threaten retaliation with nuclear weapons if the Soviets resisted.

The Soviet Union's Military Presence in Europe

During the years following World War II, the United States had relied almost exclusively on its possession of nuclear weapons as its major defense in case of enemy attack. In the years after the war, more atomic bombs were produced, the Strategic Air Command was given the responsibility of maintaining these bombs in combat readiness, and work on atomic artillery and other tactical nuclear weapons began. Still, it was a shock to the US to learn in August of 1949 that the Soviet Union had detonated a nuclear device. Although experts in the US predicted that the Soviet Union would eventually learn the secrets of the atom, the actual explosion came several years ahead of the best estimates of the Soviet Union's abilities in this field.

Following the Soviet Union's success with atomic weapons, the question of conventional defenses became more important. How at that time, had the US and her allies fared in comparison to the Soviet Union and Eastern Europe?

During the years after World War II, Western European nations made no serious attempts to develop their military strength. The armed forces they created were often used more to recapture their lost colonial empires than to ward off the Soviet Union. France, for instance, had about 400,000 men under arms in 1949, but 125,000 of those were in Franch Indochina (Vietnam). England had two divisions in Germany, one in the British Isles, and parts of several others in Asia. She had some 360,000 men under arms. Belgium, Holland, and Luxemburg had a combined force of 100,000 men. Italy had seven or eight divisions, but they were generally furnished with obsolete British equipment from World War II, and the remainder in Western Europe amounted to very little.

The Soviet satellite states in Eastern Europe boasted some one million men under arms. Their forces were not strung over the globe. Furthermore, they all used the same (Soviet) military equipment, and had the additional advantage of employing the same command structure, and training procedures.

The most dramatic difference between the military strength of the Western and Communist world can be seen by comparing the size of the American and Soviet armies. The Soviet Union had some 4,000,000 men under arms, compared to 1,600,000 Americans. Furthermore, the US had only 85,000 soldiers stationed in central Europe--the Soviet Union could easily bring 100 divisions into Germany within a month's time. Could anyone doubt its ability to march them right to the English channel, unless the US used atomic weapons to stop them?

Possible Solutions

The US could follow policies advocated since her independence--avoid entangling alliances, and protect only its own shores from Attack. Or, the United States could try to beef up its army in Europe, and encourage her allies to do the same. By 1949, many Americans were advocating the US make a mutual defense pact with European allies, promising to come to the assistance of any single country were attacked by the Soviet Union or allies. Finally, others thought that the US need only to rely on nuclear weapons as its deterrant. This school of thought advocated spending the bulk of the defense money on improving atomic weapons, and the means of delivering them. Some scientists by this time were fairly sure the US could make a bomb using hydrogen, which would be so powerful that it would require an atomic bomb to set it off.

Activity 7: Exercises

1. Identify and briefly explain the relevance to this chapter of:

   a. economic upheaval, b. burning furniture, c. communist voters, d. military balance of power, e. Greece and Turkey, f. Dardenelles, g. Czechoslovakia, h. tri-zonal cooperation, i. Berlin Blockade, j. size of the Soviet army.

2. Each of the five crises in Europe gave Americans choices corresponding to isolation, containment, and retaliation. In each of the following crisis, explain the problem, select an alternative, and explain why you selected it:

   A. Economic Collapse & Political Challenge of War-torn Europe

      1. Do not throw more money at the problem
      2. Spend billions to rebuild Europe
      3. Threaten the Soviet Union if it takes advantage of Europe's weaknesses

   B. Military Pressures on Greece and Turkey

      1. Do not waste American dollars in Greece or Turkey
      2. Invest about $400 million to help Greece and Turkey defend themselves
      3. Warn the Soviet Union to stop aiding ELAS and pressuring Turkey

   C. Czechoslovakia Coup

      1. Leave Czechoslovakia as the Soviet's 'sphere of influence'
      2. Help support other nations in potentially same situation as Czechoslovakia
      3. Free Czechoslovakia using tanks and B-29's with A bombs as support if needed.

   D. Berlin Blockade

      1. Abandon currency reform
      2. Send supplies to Berlin by air
      3. Send in tanks with B-29's carrying A bombs for support if needed.

   E. Soviet Military Presence in Europe

      1. Concentrate on defenses in Western Hemisphere
      2. Enter mutual defense pact with Germany, France, England, etc., and beef up American and European armies.
      3. Concentrate on developing nuclear weapons for use if the Soviet Union invades Western Europe.

   F. About this Chapter

      1. Why do you think this chapter focused on the five crises addressed in exercises A-E? For whom were these crises?

2. What do you learn in this chapter about how the countries other than the Soviet Union acted in their own 'spheres of influence'. What are you told about colonialism?
3. Does this chapter present an identifiable point of view?

Footnotes:

1. Richard J. Walton, The Price of Vision: The Diary of Henry A. Wallace (Boston: Houghton Mifflin Co., 1973), p. Richard Hofstadter, ed. Great Issues in American History (New York: Vintage Books, 1958), Vol. II, p. 421; Walton, op. cit. p. 103; Hofstadter, op. cit., p. 423; Ibid., p. 439.

2. Harry S. Truman, Year of Decision (Garden City: Doubleday & Co.), p. 102.

3. Harry S. Truman, Years of Trial and Hope (Garden City: Doubleday & Co.), p. 241.

Connections:

Years of Decision, Europe, 1947-50

This lesson discusses three major responses, containment, massive retaliation, and 'sphere of influence' to Soviet pressures in Europe. It then describes the five major post-war problems--war torn and impoverished condition of Europe, Soviet pressures on Greece and Turkey, the Berlin Blockade, communist coup in Czechoslovakia, and Soviet military presence in Eastern Europe.

One effective way of teaching this lesson is to discuss and explain the three general responses to Soviet pressures. Then divide the students into small groups and have them decide on a course of action in each. Have students support their arguments by referring to the general policies. Finally, use appendix, and show that the United States used containment and prevented further Soviet encroachments in Western Europe.

Solutions to Five Crisis

Historians have generally given Harry Truman high grades for his handling of the five crises discussed in the last activity. Each of his solutions, geared to the containment doctrine, succeeded in accomplishing its objectives. Here we examine his solutions to the five crises.

The Truman Doctrine

President Truman's determination to contain Soviet expansion was strengthened by a long telegram from Ambassador George Kennon. In the now famous 8,000 word telegram sent from the Soviet Union, Kennon pointed out that the Soviets were "fanatically" committed to the belief that "the internal harmony of our society (must) be disrupted, our traditional way of life destroyed, (and) the international authority of our state be broken."[1] Truman thus interpreted the Soviet Union's support for the communist guerillas in Greece and her pressure for a base in Turkey as part of a global strategy to increase its power and weaken that of the rest of the world. Unchecked, Truman believed, such expansion would only fuel the demands for even greater power and influence.

In an extraordinary move on March 12, 1947, President Truman asked Congress to appropriate $400,000,000 to help Greece and Turkey defend themselves. "If we falter in our leadership," Truman warned, "we may endanger the peace of the world--and we shall surely endanger the welfare of our nation."[2]

Truman's request caused a flurry of protests throughout the land. The President, after all, was asking America to break with tradition and come to the aid of two small and inconsequential nations. Nevertheless, after much debate, Congress voted for Truman's aid package. The economic and military assistance provided by the US helped both Greece and Turkey resist communist pressure. Greece was able to subdue the communist guerilla uprising, particularly after Marshal Tito of Yugoslavia broke with the Soviet Union and prevented it from using Yugoslavia as a supply route. Turkey was able to resist the Soviet Union's demand for bases and territory. Many of the results of this aid policy, known as the Truman Doctrine, continue to the present (1980). Both Greece and Turkey are partners with America as members of the North Atlantic Treaty Organization, the defense umbrella for all of Europe. Furthermore, after many years under military rule, Greece has become democratic nation.

The Marshall Plan

On June 5, 1957, President Truman's Secretary of State addressed Harvard's graduating class. In this speech, Secretary of State George Marshall announced that the United States was prepared to do whatever was necessary to assist Europe "in the return of normal economic health. . . . Our policy," Marshall intoned, "is directed not against any country or doctrine but against hunger, poverty, desperation and chaos. Its purpose should be the revival of a working economy in the world so as to permit the emergence of political and social conditions in which free institutions can exist."[3]

Marshall's offer was welcomed by the destitute nations of Europe. Before the end of June, foreign ministers of several Western European nations met, and the Soviets sent representatives. Three months later the non-communist nations of Europe (the Soviet Union forbade participation by nations under its influence) met to draw up comprehensive plans for economic recovery. In December, President Truman submitted a proposal to Congress calling for the appropriation of some $17 billion over four years to finance the program. Congress debated this measure for several months. The nudge toward final approval came in March, 1948, with Jan Mazaryk's death. Truman urged Congress to complete its vote before the elections in Italy that were likely to produce a communist government in that country. The bill to authorize the European Recovery Plan, as it was known, passed Congress on March 31, and was signed into law three days later.

The effects of the Marshall Plan were both immediate and enduring. Over the next three years, production in Marshall Plan countries increased by 37%, and steel manufacturing doubled. By 1952, output in most of these nations surpassed the pre-war levels. This dramatic rate of increase continued through the 1950s, and into the 1960s and 1970s. Nowhere was the economic miracle of Europe more in evidence than in West Germany. During the 1970s, its per capital production actually exceeded America's. The total bill to the American taxpayer was only $12 billion, five billion less than the original estimate.

The Berlin Blockade

Perhaps the most dramatic response to Soviet expansion in Europe was America's airlift to Berlin. It will be recalled that the Soviet Union had announced the halting of passenger and freight traffic from West Germany to Berlin for "technical reasons." General Lucius Clay, America's commander in Berlin, believed this was an attempt to bring West Berlin and later all of West Germany under Soviet domination:

> When Berlin falls, western Germany will be next. If we mean to hold Europe against Communism, we must not budge. . . . If we withdraw, our position in Europe is threatened. If America does not understand this now . . . then it never will, and communism will run rampant. I believe the future of democracy requires us to stay.[3]

America's response to the blockade was the famous air lift. Although it had been tried unsuccessfully several times during World War II, never before in history had a large city been supplied by air. The United States and her allies had to deliver 4,000 tons of food to Berlin every day, and another 4,000 tons of other supplies. Not only did the allies feed 2,500,000 people with this air lift, but they also supplied the raw materials and energy to keep Berlin's factories going. In the early days of the air lift, only a few thousand pounds were delivered but toward the end of the 11 month seige, 1017 planes or one per minute landed in West Berlin. In May, 1949, the Soviet Union finally lifted its blockade, and access to Berlin has not been thwarted since.

The North Atlantic Treaty Organization

Preliminary steps to defend free Europe were taken when Great Britain, France and the Benelux* countries formed a mutual defense pact in 1948. With Congressional approval, President Truman began negotiations for a more comprehensive European defense alliance with American participation. These talks lead to the formation of the North Atlantic Treaty Organization in April, 1949. Member nations were pledged to defend one another in case of attack. Eventually sixteen nations joined NATO. In addition to the original members, Italy, Portugual, Denmark, Norway, Iceland, Canada, and the United States enlisted, and West Germany, Greece, and Turkey joined later.

President Harry Truman's decision to permanently station four divisions of American soldiers in Europe led to a major debate between isolationists and internationalists. The isolationists, among whose leaders were President Kennedy's father, Joseph, former President Herbert Hoover, and Republican minority leader Robert Taft, were prepared only to defend the Western Hemisphere, Great Britain, Japan, Formosa, and the Philippines. At that time, they did not contemplate protecting mainland Asia, Europe, or permanently station American troops in foreign lands. The internationalists, on the other hand, believed that the United States could not afford to lose Western Europe, and believed that American soldiers on the continent would act as a deterant against a Soviet attack. Eventually, the internationalist won the debate, and to this day (1980) some 180,000 American soldiers are stationed in Europe.

Activity 8: Exercises:

1. Identify or define and briefly show the relationship to the chapter of each of the following:

   a. George Kennan, b. Truman Doctrine, c. $400,000,000 d. Marshall Tito, e. European Recovery Plan, f. Italian elections, g. East Germany, Hungary, and Czechoslovakia, h. steel production and per capital income, i. Afghanastan, j. Lucius Clay, k. West Berlin, l. one plane per minute, m. NATO, n. isolationists, o. 180,000 American soldiers, p. neutron bomb.

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*Belguim, the Netherlands, and Luxumbourg

2. Summarize the main points of the philosophy of containment and show how it was applied in at least 2 of the 7 crises.

3. For whom were these "crises"?

4. Do you think that the United States should have given Marshall Plan aid to communist nations in Europe, if they had asked for it and were willing to tie their economies to the nations of Western Europe? Why or why not?

5. Do you think that any one of the 4 crises should have been approached from a philosophy other than that of containment? Why or why not?

Footnotes:

1. quoted in Arthur S. Ling, American Epoch (New York: Alfred A. Knopf, 1955), p. 669.
2. quoted in Richard Hofstadter, ed. op. cit., p. 418.
3. quoted in Morrison, Commager and Lichtenberg, The Growth of the American Republic, Vol. II, p. 662.

Activity 9: Espionage, the Government, and the Cold War

Introduction. During the late 1940s and early 1950s, several spy and espionage cases were tried in US courts, receiving much publicity. The subject of the cases was generally the supposed passing of nuclear weapons secrets to the Soviet Union by American citizens. What folows is a new analysis of these "spy cases" and background information, based partially on US government documents only recently released. As you read, you may wish to consider whether this activity presents information from an identifiable bias, and if so, how that affects you.

A. The Public Gets the Red Alert

As the radioactive fallout from two atomic blasts made its way through the earth's atmosphere in August of 1945, most Americans wanted a celebration. It was all over for the good people of Boston, Massachusetts, as well those in Topeka, Kansas. Hiroshima and Nagazaki were now bad memories in the name of a just cause. The nation wanted the recovery and prosperity that had been promised to them at the end of the horrible conflict called the second World War. The next armed struggle involving Americans would not occur until 1951 in a far away place known as Korea. Even then, the dying would seem more remote compared to the mass destruction of the previous war. Nothing could or should get in the way of a nation that was ready to assume its rightful place as the leader in a new world order.

Yet all was not well in the years from 1946-1954. Yes, the country received its hoped for prosperity and became the greatest power on the planet. But with this new status grew a fear that would be unparalleled in American history. As if it was the real life offspring from those science fiction movies which had flourished in this era, a creeping terror began to reach into the homes of many Americans. People started to realize that their hard fought treasures embodied in that phrase, "the American way of life," had to be protected from an enemy more insidious than that encountered on the beaches of Normandy or Iwo Jima. This enemy required its citizenry to be vigilant and loyal while they were actively pursuing the good life within the country's borders. Americans wanted to respond to a patriotic call and await orders to engage in the next good fight. The calls would come but in some most peculiar ways.

We called this the Cold War and were told it pitted two super powers in entrenched economic and ideological battles. The United States and the Soviet Union stalked the globe for allies to enlist in their modern day crusades. We will not look at Yalta, the Berlin Crisis, or the Korean conflict in this chapter. Our battle fronts will be found in the small towns and big cities of America. It was there that Americans came to believe and fear that their security was being threatened from this thing called communism Believing it to be more sophisticated and covert than fascism, this new enemy did not need a holocaust or blitzkrieg to get its dirty work done. How we came to fear it, what it did to our society, and why it was inextricably woven into the nuclear dilemma will be the story of this chapter.

The first intimations that the Cold War had moved from the rubble of post war Europe to the shores of North America were found in the newspaper headlines of Feburary 16, 1946. The headlines of the major American dailies were very similar on that day. The feature story was usually worded something like this: "Russian Atomic Spy Ring Uncovered in Canada." The short-lived confidence that had accompanied the explosion of "our" bombs over Japan was shattered with that headline. A common sentiment and question ran through the heartland of America during that February: Were our World War II allies now bent on stealing America's top level secrets? While this alleged ring had been set up in Ottawa, Canada, it appeared to be a sophisticated operation capable of infiltrating the American intelligence next week.

The American public was not given many substantive details about the Canadian investigations. Knowing only that Canadian and British citizens were involved, Americans could not find out much about the details of the atomic spy ring. In fact only one of the more than 20 people indicted on espionage charges had anything to do with atomic research. Allan Nunn May, a British physicist who had worked for the Canadian government in 1944, admitted at his London trial in May, 1946 that he gave some minor information concerning uranium samples to an undisclosed agent during the war. Furthermore, this data was available in published journals at the time. None of the other spying had anything else to do with atomic energy or the United States. However, these aspects were not highlighted in the press accounts of the time. On the contrary a very different impression was given. (See newspaper headline on the following page.)

The press was now alerted to atom spy stories. All too often it was the splash and dramatic impact of the story that was the major focus of these articles relating to alleged espionage. The careful scrutiny and analysis of all the facts managed to be forgotten or shelved for another day. After all, the headlines of the moment could dazzle the imagination of the reader.

The House Committee on Un-American Activities (H.U.A.C.) was one organization that made sure the news media was well supplied with cases purporting Russian subversion in the United States. H.U.A.C. was established by Congress in the 1930s to investigate all forms of possible subversion in the country. Usually preoccupied with checking up on the Communist Party and its various "front organizations," H.U.A.C. was a constant thorn in the side of the Democratic administrations of Roosevelt and Truman, whom the committee had characterized as being "soft on communism." H.U.A.C. was almost always composed of conservative Republicans and southern Democrats, and they were waiting for their chance to embarrass the New Deal Democrats who had been in power since 1932. Their chance arrived with the furor surrounding the Canadian incident. From that time on H.U.A.C. would manage to remain lodged in the public's consciousness and would excell in keeping the press informed of the latest news about communist infiltration into American society.

The Boston Daily Globe

Reg. U. S. Pat. Off.

1948
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BOSTON, SATURDAY MORNING, JULY 31, 1948

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Girl Admits She Gave War Data to Soviet

Accuses U. S. Official as Red Informer

By ROBERT J. DONOVAN

WASHINGTON, July 30—The most gripping spy story to come out of Washington since the war was unfolded today before a Senate committee by Elizabeth Terrill Bentley, a Connecticut girl, who said she was a wartime Communist party espionage agent and gave secret information to Russia. She also said she was a Vassar graduate.

In testimony rivaling the revelations in the Canadian spy case, Miss Bentley said she obtained indirectly from an official then in the White House, whom she did not identify, political and military information including the fact that the United States had broken a Russian code.

This was in 1944, she said, and the Russians were very much excited and asked that she find out which code it was. She tried, but was unable to get this information.

She said also that one of her alleged informers during the war was, until a month ago in an important Department of Commerce post where he was involved in the formulation of policy on shipment of strategic and other materials to Russia and eastern Europe.

(AP Wirephoto)

SELF-CONFESSED EX-RUSSIAN SPY TESTIFIES—Blonde Elizabeth T. Bentley tells Senate investigators she even had White House "contact" during war.

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The other group that gave the press data about spy networks was the Federal Bureau of Investigation. J. Edgar Hoover's organization was not the attention seeking creature that H.U.A.C. was, but it did provide constant leaks throughout the Cold War concerning top level espionage in the government. The F.B.I. was involved in all the major investigations of this era, and in many cases held onto the most revealing information about the true nature of what was going on behind the scenes. The F.B.I. could do little that was wrong. It held a special place in the hearts to most Americans in the 1940s as a courageous fighter against crime. Their credibility and integrity were never seriously questioned by the vast majority of journalists and the general public at the time.

H.U.A.C. and the F.B.I. kept the revelations flowing to the press in the wake of the Canadian disclosures. The chairman of H.U.A.C., Representative John Wood of Georgia, gave the New York Times this story on March 8, 1946:

> Sufficient evidence of attempts to obtain information concerning the atomic bomb by foreign agents in the USA has been accumulated. The committee was working closely with other government agencies in its present spy hunt, and adds that he was not sure whether the trails he was following had any connection with the leaks recently disclosed in Canada.

Not to be outdone, the F.B.I. announced later in the same month that they had arrested a Soviet naval officer on espionage charges in Seattle. Quickly, H.U.A.C. jumped on this and a combination platter of confusing intrigue was dished up to a dumbfounded public. The New York Times again reported:

> The committee announced several weeks ago that it was checking reports that a foreign spy ring was attempting to steal the nation's atomic bomb secrets . . . As one of the first reactions to the arrest came the question of whether Lieutenant Rodin's (Soviet naval officer) purported activities might relate in any way to atomic energy secrets. This resulted not only from the furor of the Soviet Union's alleged spy ring in Canada, but over the fact that the Pacific Northwest is the home of the Hanford (Washington) plutonium production plant, which played a role in the development of the atomic bomb.[2]

As it turned out, both stories were unsubstantiated. Robin's trial in June proved that there was no relation to atomic secrets or to the Canadian incident. Wood's statements were simply hunches he offered to some eager reporters.

If 1946 was the year when the popular image was of an enemy at the door, then 1947 brought him into the home. Buoyed by the Republican gains in Congress in November, 1946 H.U.A.C. began the new year with an aggressive investigation into communist subversion. Some notable events were presented to the public. The new chairman of H.U.A.C., Parnell Thomas of New Jersey, boldly claimed that there was not subversion in our own top echeleons of government. His target was the current Director of the National Bureau of Standards, Edward Condon. Condon had been the deputy to Robert Oppenheimer on the Los Alamos Project in 1943. He resigned that job because he was upset with the tight security requirements. When this past fact came to the attention of Thomas and H.U.A.C., they used it in building a case to question Condon's loyalty to America. A number of articles were written in March, 1947 accusing him of being a security risk. Summing up their investigation a year later, Thomas was quoted in the newspapers as saying, "he was one of the weakest links in atomic secrecy" and that he rubbed shoulders with Soviet agents.[3] While the implication was obvious, though, the basis for the charges were obscure. However, it was enough to ruin Condon's career and rekindle America's fear of an enemy that was getting closer and closer to the pulse beat of the nation's decision making center, Washington D.C.

As the Condon affair melted away, a new disclosure materialized for Americans in July of the same year. This time the F.B.I. revealed that two American army sergeants "had stolen vital atomic secrets from the heart of the atomic bomb project at Los Alamos." The newspapers quoted Parnell Thomas' reaction to this release by printing, "What I feared is happening. Under the Atomic Energy Commission there is very little security. The A-bomb secrets are not longer safe."[4] The A.E.C. was being criticized in some circles as being dominated by wooly minded scientists who did not understand the need for tight security. The Condon probe and the army arrests seemed to bear this out in some peoples' minds. However, months later with little fanfare, the sergeants were only found guilty of souvenir hunting and Condon had never done anything to jeopardize security.

By the fall of 1947 espionage inquiries were the topic of the day again. People were surprised to discover that H.U.A.C. was now investigating Hollywood as a possible center of communist subversion in the country. Why Hollywood? Foreign observers of the American scene have often commented that movie stars hold a special place in the hearts of Americans, similar to royalty in Europe. If there was subversion in the movie industry, then surely nothing was sacred. H.U.A.C. never came close to proving this, but they did taint the reputations of many actors and screen writers with the label of "communist dupe." The celebrated case of the "Hollywood 10" was the accomplishment of these round of H.U.A.C. hearings. Ten screen writers refused to answer questions pertaining to any alleged communist affiliation and were subsequently convicted on contempt charges. These hearings were widely publicized amidst a circus-like atmosphere that would have been very amusing except for the fact that the writers ended up spending a year in prison for their refusal to cooperate with the committee.

Where was the atomic espionage in all of this Hollywood publicity? The committee kept promising the press they would produce several mystery witnesses who would disclose startling details about a spy ring in the motion picture industry. This never happened. But H.U.A.C. continued to leak often times misleading and contradictory information to the press in 1947. For example this New York Times headline in October indicated the confusing information that the public had to decipher: "Film Inquiry Reveals Move by Soviet Agents to Obtain Atom Research Data-Expert Balked It--Dr. Oppenheimer Called Step 'Treasonable' Investigator Says--Two More Writers Hit--Lardner Jr. and Lester Cole Face Contempt Action As Hearings Halt Abruptly." This represented plenty of media coverage and confusion but no spies or subversion. Nonetheless, H.U.A.C. continued to bask in the glare of front page publicity, which had the effect of rattling the publics' senses into a state of profound uneasiness.

1948 was a watershed year in the country's growing fascination with the spy stories. Thus far, there had been disquieting but only vague rumblings about espionage in America. Canadian officials, screen writers, a Soviet sailor, and a director of the A.E.C. had been implicated, however recklessly, in communist intrigue. Despite the hullabaloo and moments of anxiety America had not been exposed to the reality of an entrenched espionage ring. It was all slightly unbelievable.

This changed in the summer of 1948. Two former self-confessed Soviet agents were paraded by H.U.A.C. in front of public hearings in Washington D.C. Between the two of them they directly accused scores of former and current officials in all the branches of the government of belonging to an underground Communist Party spy apparatus. They had said that this network was so extensive and sophisticated that it operated unabated from the 1930s through World War II. The people they named produced shock waves across the country because they were among Roosevelt's most respected advisors. Some of the names included Alger Hiss (former State Department official), Harry Dexter White (Assistant Secretary of the Treasury), Lauchlin Currie (White House advisor), Nathan Silvermaster (Economic Consultant) and William Remington (Economic Advisor). Most of these names would have been very familiar to Americans who had lived through the Great Depression and World War II.

There were too many officials named for anybody not to be concerned about the security precautions in the federal government. As the H.U.A.C. proceedings dragged on through August, the spotlight fell on Alger Hiss, one of the most respected of all the accused government officials. Chambers revealed incredible details about Hiss' supposed communist activities, dredging up tiny points about Hiss' personal life. By the end of the summer the press and the public were ready to think the unthinkable. This golden boy of the New Deal, Harvard Law School graduate, founding Secretary General of the United Nations, and President of the Carnegie Endowment was probably part of a vast conspiracy. In November, 1948 former Soviet Agent Chambers was saying that Hiss passed typed copies of State Department documents (known as the Baltimore Documents) and "microfilm" (known as the Pumpkin Papers) to him for use by the Soviets. Richard Nixon, who became the principal investigator for H.U.A.C. in the case, told the press, "This film furnished the link of evidence which was needed to establish that the organization of espionage conducted in cooperation with members of the Communist Party in America has been amazingly successful for ten years."[6] Hiss was eventually indicted on December 15, 1948 for perjuring himself when he claimed he knew nothing about any of this business.

While the Hiss investigation ostensibly had nothing to do with atomic espionage, it served to bolster the image of H.U.A.C. in the public's mind and give the impression that spying was so pervasive it took in all sectors of the government community. Hiss was a symbol. If he was convicted, all of the other unsubstantiated charges against the rest of the accused would be seen in a new light. As Alistair Cooke wrote at the time, "an entire generation was on trial" with the Hiss case. The blurring process that began with the Canadian incident was in full force by the time of the Hiss case. Disconnected stories and investigations were lumped together in articles for people to try to make sense of. At the height of the Hiss investigations in the fall of 1948, H.U.A.C. claimed it had definite information about atom spies in the government. Nothing of substance came from these charges but people on some level blended it in with the intrigue that was swirling around the Hiss case.

Walter and Miriam Schneir give us a summary of what this time of confusing events meant for the American public.

> Soon after Hiroshima, millions of Americans had been educated--with the help of scientists--to some of the facts of life in the atomic age. In the following four years, much of this education was erased as every literate citizen was exposed to a massive barrage of stories about "atomic secrets" and "atomic espionage." Press sensation followed press sensation in an endless procession. So thick and fast did the headlines come that it is unlikely most newspaper readers could possibly have distinguished one espionage case from another. They all tended to melt into one odious whole-part of what some called the "mess in Washington."
>
> The Hollywood hearings were mixed together with atomic espionage charges--incredibly, the very same headline mentioned Ring Lardner Jr. and J. Robert Oppenheimer. The Bentley accusations and the Hiss-Chambers controversy were scrambled together and

> tossed into the same stew pot with the Condon case (and others) . . . all "cases" never tried in any American court of law. How could one possibly separate these accusations, pick out the innocent from any who might be guilty, or decide soberly whether the alleged crimes truly imperiled the safety of the nation?"[7]

It was an ominous sign on the eve of the two most sensational trials in the 20th century for this country.

Activity 10: Exercises

Are there are similarites in the press coverage of the events mentioned thus far in the reading with reporting today? In what ways has it changed or remained the same?

It might be useful at this point to do some research on the nuclear freeze movement. The class could spend several periods in the library reading and comparing different articles covering this campaign. Are there any examples of fear and suspicion by the press or quoted government officials on this movement? How does it compare to what seemed to exist in the late 1940s?

B. Two Cases, One Enemy: The Hiss and Rosenberg Trials

The public wanted some answers on the eve of Alger Hiss' first trial on May 31, 1949. One might say that they finally got the answers they had come to expect when a verdict was rendered on January 21, 1950. Hiss was pronounced guilty as charged on two counts of perjury and sentenced to five years in a federal penitentiary. For a few people the two trials Hiss had to endure (May 31-July 15 and November 19-January 21, 1950) raised more questions than the unanimity of the guilty verdict. These questions have continued and grown in magnitude over the years, but at the time of Hiss' conviction they were no where to be seen on the front pages of the country's newspapers.

Hiss' case has been the subject of dozens of books, and there will not be an attempt now to summarize the court room proceedings. However, there were some distinct patterns that emerged in his trials that will have some uncanny similarities to another great political case of this era. These patterns revolve around how the evidence and witnesses were presented to both the jury and a highly sensitized public. Witness testimony developed into a battle between the informer vs. the well placed government official. Each side would have their legion of supporters, both in and out of the court room. Who could be trusted? Who was more reliable during these times of espionage and fear, a Chambers or a Hiss? Secondly, the evidence became channeled into the categories of the sensational disclosure versus the circumstantial and improbable. The prosecution would dish out memorable exhibits which would jar the immediate sensibilities of the jury and public. The defense would hope that the improbable weight of many circumstances would outweigh the furor of the government's "big guns.'

The jury ended up believing an informer. In the person of Whittaker Chambers the prosecution was successful in elevating his role in the case to that of the redeemed sinner. After more than a decade of supposed underground espionage activities, Chambers' image was now projected as a sincere patriot ready to do his patriotic duty. The prosecution had to excuse or apologize for such past activities as several instances of perjury, repeated use of aliases, an erratic mental condition, and a very bizzare writing history. The fact that the government's leading attorney, Thomas Murphy, accomplished this in the end says a lot for how Hiss' lofty reputation was repeatedly deflated while Chambers' was being resurrected.

Murphy made it appear that Hiss' numerous and impressive character witnesses were just trying to protect their own kind. Among them were two Supreme Court Justices, one federal judge, one former Presidential candidate, and one Assistant Secretary of State. These people represented a liberal intelligensia with very established roots in the venerated institutions of Eastern education. Murphy took apart the high and mighty image of Hiss, making his character witnesses seem removed from the common origins of the jury. Murphy thought of himself as the practical sort and invited the jury to identify their feelings with his. The legal defense of Hiss became trapped by the very credentials and style that were supposed to aid his case.

A good prosecution always needs corroborating evidence to reinforce their principal witnesses. The government found this in the Baltimore Documents and Woodstock typewriter, #230.099. The documents presented were obviously pilfered from the State Department when Hiss worked in the Trade Agreements Section. Their value for espionage purposes was debatable at the time, though the prosecution emphasized their top secret nature. They covered a number of unrelated areas, none of which pertained to atomic research. That was not the issue. The issue was whether Alger Hiss had stolen them, typed copies on his Woodstock typewriter, and then given them to Chambers for eventual delivery to the Soviets. The second jury believed this possibility as the immutable truth and were convinced that the typewriter introduced as evidence was the one that did the deeds.

Hiss' defense could never escape from the shadow of the typewriter. That was the corroborating evidence that linked the Baltimore Documents to Hiss. Hiss' lawyers tried to suggest ways in which

Chambers might have stolen it, snuck in and used it, or obtained it surreptitiously after giving it away. Nothing worked. The typewriter was the smoking gun that would not be diminished in the jurys' minds.

The conviction served to solidify the pervasive feeling that conspiracy was afoot in the land. Now Republican and Democrats were beating the trail to uncover the "red menace." President Truman, who had defended Hiss throughout 1948, now approved a loyalty test oath for all federal employees with the purpose of screening out people with communist sympathies. Its implementation was often capricious and arbitrary because the criteria for loyalty was obscure and not subject to public scrutiny. A rash of bills and laws were being formulated and enacted on the local, state, and national level after the Hiss conviction to allow the government more powers in investigating communists and their front organizations.

The dimensions of the purported conspiracy were never defined. Hiss was the only conviction that had been secured against a former government official. Many people thought there were probably others like Hiss, guilty of even more heinous crimes. The international scene in 1949 seemed to combine with the increasing suspicion at home to produce a potent witch's brew of alarm and near hysteria. The world had seen the Soviet take over of Eastern Europe, the Berlin Crisis, the communist victory in China, Communist Party election victories in Western Europe, and finally President Truman's solemn announcement on September 23, 1949: "We have evidence that within recent weeks an atomic explosion occurred in the USSR."[7] Most of the press and many politicians began to scream "our bomb had been stolen." Richard M. Nixon, riding a crest of popularity after the Hiss conviction, remarked:

> . . . I feel the American people are also entitled to know the facts about the espionage ring which was responsible for turning over information on the atom bomb to agents of the Russion government.[8]

There it was again, the blurring process in action. What ring, who was involved? Which case, who were the accused? What mattered was that the public perceived the Soviets as having stolen the secrets. What did experts know anyhow? Were not Condon and Hiss experts? It was only a matter of time before the actual thieves were caught. No more fancy talk. A confused American public wanted some plain and simple truths.

To some people there was no shock and surprise at President Truman's announcement. Much of the scientific community had estimated in 1945 that the Soviets would develop their own bomb in five years or less, although estimates varied widely. Certainly, the Soviets had the theoretical knowledge for years and possessed the raw materials necessary for development. The only question was how quickly they could rebuild their industrial base after the massive destruction resulting from World War II. These realities were not the general topic of the day. Most Americans believed it was the road of espionage that the Soviets had taken to produce their atomic bomb.

Days after Alger Hiss received his sentencing in federal court, another sinister case was shaping up across the front pages of the American press. Americans received word that a mild mannered scientist of German origin had walked into a London police station and confessed to having passed secret atomic information to foreign agents. His name was Klaus Fuchs, and he had worked for the British nuclear program. More importantly he was part of the Biritsh mission to the Manhattan Project from December, 1943-June, 1946. He had spent most of his time at Los Alamos, working on problems relating to the theoretical design of the atomic bomb. The news produced an even larger furor than the Hiss case.

One man who would give the public his version of the story launched his career as the number one communist spy investigator on February 9, 1950, shortly after Fuchs' arrest. Joseph McCarthy told an enraptured audience that he had a list of "205 names of State Department employees who have been named as members of the Communist Party and members of a spy ring."[9] He went on to say how people like Alger Hiss had been allowed to operate for years in in establishing a ring, while the government never seriously investigated the matter despite warnings. That speech was a call for action, and it ushered in a period of history known as the McCarthy Era, serving to heighten the hysteria developing around Fuchs' disclosure.

Eventually Fuchs' confession led to a trail of espionage that had its base in the United States. That trail formed the basis of the Rosenberg case. The F.B.I. was the principal investigator, and they provided the press in 1950-51 with some sensational revelations. First, there was Fuchs' counterpart in the United States, Harry Gold. Equally as mysterious and shy as Fuchs, Gold had been a chemist for a small company in Philadelphia. He had supposedly acted as a courier for Fuchs. Gold was arrested in May, 1950. The next most significant arrest in the case came in June. David Greenglass, an ex-G.I. and mechanic, had been stationed in Los Alamos during the war. The F.B.I. claimed he had given Gold atomic bomb information, who in turn had passed it on to Fuchs. July brought the most fateful arrest of the case. Greenglass' brother-in-law, Julius Rosenberg was picked up by the F.B.I. He owned a small machine shop in New York and was alleged to have been the mastermind for the American operation that fed information to Fuchs. On August 11 Rosenberg's wife, Ethel, was arrested. Finally, on August 18 Morton Sobell was arrested at the Mexican border as a co-conspirator of the Rosenbergs.

According to J. Edgar Hoover, the head of the F.B.I. and chief supervisor of the investigation, the case was the "crime of the century." Its trial began on March 6, 1951 in the Federal District Court House in New York City. Entitled, U.S.A. vs. Julius Rosenberg, Ethel Rosenberg, and Morton Sobell, it surely would be the most sensational trial of the Cold War. Among the nine Americans arrested during 1950 in connection with the atom spy ring, only the three defendants mentioned above were charged with conspiracy to commit espionage in relation to the atom bomb secrets. And only the Rosenbergs and Sobell maintained their complete innocence in this regard. The other alleged conspirators were either tried separately on lesser charges, given immunity from prosecution, had their trials delayed, or their sentences postponed until after the verdict in the Rosenberg/Sobell trial. This was done because some of the original nine pleaded guilty and were willing to act as the principal accusers against the three defendants. The witnesses and evidence in the Rosenberg trial had an even more peculiar twist than in the Hiss case. The public would be treated to an incredible spectacle of intrigue and treachery, glued together by a confusing web of circumstances and testimony.

As in the Hiss case, certain familiar themes emerged in this trial. As far as the trial testimony went, there developed a dual between the confessor versus the resistor. By the time of this trial people like Chambers and Bentley were making it common place for so-called self-confessed spys to step forward and publicly tell all about their underground activities. The role of confessor received an almost elevated status. Usually protected from prosecution and often times reimbursed by the government, they would appear at hearings and trials to help the prosecution in any case against alleged subversives. The Rosenberg/Sobell trial made full use of this technique. The prosecution was very successful in getting the jury to believe the fantastic allegations of the four principal accusers: Max Eliticher, Harry Gold, and David and Ruth Greenglass. The accusers seemed to benefit from a special aura that the public held around the confessor as an established, truthful witness to history.

The few individuals who adamantly resisted the allegations of the accusers usually did not fare so well. Nowhere was this more clearly illustrated than in the Rosenberg case. A resistor was one who totally maintained his/her innocence from all charges of subversive activities and refused to cooperate with the government to get the case dropped or lessened. Rather than assuming a heroic quality in the mind of the public and jury, they were made to appear as stubborn, cold blooded professionals who were indoctrinated never to surrender. Their humanity was undermined with the label of Soviet agent or atom spy. The pre-trial and trial publicity construed the figures of Rosenberg and Sobell in these terms. Still, the question then and now was whether the defendants were actually guilty of conspiracy to commit espionage.

The prosecution had to substantiate the word of their confessors turned accusers to prove this. Here again the sensational was used by the government to devastate the defense. Instead of document- retrieved from a pumpkin and copies made on a typewriter, we now had a Jello box top, a sketch of a lens mold, a hollowed out console table, and a hotel receipt card as some of the key prosecution exhibits. The prosecution basically said this: Rosenberg instructed Gold to use a Jello box top as an identification marker when he met Greenglass near Los Alamos, New Mexico. Greenglass then gave Gold sketches of a lens mold apparatus that was to be used in the dropping of an atomic bomb. The prosecution produced a hotel receipt from the hotel Gold allegedly stayed in while getting this information from Greenglass. When Gold returned to New York, the Rosenbergs photographed Greenglass' sketches, as they supposedly have done on other occasions, storing the film in their console table.

The defense seemed to be overpowered by the government's case, sometimes missing opportunities to scrutinize testimony or evidence. Harry Gold's story as an agent was accepted outright and the Greenglass sketches were not examined for their validity. The prosecution maintained that Sobell had fled to Mexico upon hearing of the arrests of some of the accused. Yet, the F.B.I. and government were not thoroughly cross-examined on how Sobell was brought back to the United States. Sobell had maintained that he was kidnapped by the Mexican authorities at the request of the F.B.I. These were a few of the numerous examples of how the defense seemed to lack an aggressive posture in putting forward their case to the judge and jury.

The Rosenberg/Sobell case was complicated. Only a few aspects have been mentioned here to convey an impression of the exotic and strange quality that highlighted the presentation of some of the key evidence. Yet, in other ways, it was a rather simple case in the minds of millions of Americans. Communism and the Soviet Union seemed to be on trial. This issue interfused with much of the evidence, making it hard to distinguish when substantive evidence began and ideology left off. Using Jello box tops, drawing crude sketches of atom bomb parts, and hiding film in a table were supposed to exemplify the hidden workings of a world wide communism. The jury's guilty verdict on March 29 showed how effective this notion had been.

Judge Kaufmann delivered his sentence on April 5. The Rosenbergs were to die in the electric chair and Morton Sobell was to spend 30 years in a federal penitentiary. Kaufman's statements reflected the harsh and vindictive mood of the times:

> I consider your crime worse than murder. Plain deliberate contemplated murder is dwarfed in magnitude by comparison with the crime you have committed.

> In committing the act of murder the criminal kills only his victim . . . But in your case, I believe your conduct in putting into the hands of the Russians the A-bomb years before our best scientists predicted Russia would perfect the bomb has already caused, in my opinion, the Communist aggression in Korea, with the resultant casualties exceeding fifty thousand and who knows but that millions more of innocent people pay the price of your treason. Indeed, by your betrayal you undoubtedly have altered the course of history to the disadvantage of our country . . .
>
> Indeed the defendants Julius and Ethel Rosenberg placed their devotion to their cause above their own personal safety and were conscious that they were sacrificing their own children . . . Love for their cause dominated their lives--it was greater than their love for their children . . .[10]

Kaufman pronounced his version of the simple truths that were represented in the case and gave the American public what is wanted to hear.

Through this one case the nation and the world was given the ultimate conspiracy that explained how the Soviets had obtained the atomic bomb. Not only did this case symbolically condemn all those accused of communist activity since the Hiss case, it unleashed a renewed fervor for adopting stringent security measures at home and helped to generate an international arms race of unparalleled magnitude. The mood was to have people who were tough and pragmatic in power so the "soft security" of the New Deal years would not be repeated.

The Hiss and Rosenberg cases stood out among all the investigations between 1946-1954. They served as the centerpieces in a vast espionage network that more and more people had come to believe had infiltrated the American government. Whether these two cases or thousands of others had anything in common, did not seem to matter to the majority of a frightened public. The guilty verdicts in the Hiss and Rosenberg cases became the catalyst for the strengthening of internal security and the increased military expenditures that began again after World War II. Decisions to build the H-bomb and increase America's nuclear arsenal were made in this atmosphere of fear and distrust of the Soviet Union. These two cases played more than a small part in prompting those decisions.

Activity 11: Exercises

Should the outcome of the two cases in the reading played a major role in the build up of our nucelar weapon systems? Why or why not?

The class could do some additional research and reading around how the Truman and Eisenhower administration pushed ahead with an expanded nuclear weapons program. Discuss how the Rosenberg and Hiss cases might have provided specific reasons on why these decisions were made?

C. Who Are the Victims?: Lessons for a Nuclear Age

It has been more than 30 years since Alger Hiss, Morton Sobell, and the Rosenbergs were found guilty in their respective trials. Alger Hiss spent almost four years in Lewisberg Penitentiary before being released on parole. A brilliant career ruined, he managed to get a job as a stationary salesman for around 10 years. Morton Sobell had a harder time. He spent more than 18 years in a federal prison, some of which time was done in the notorious Alcatrz Prison. After his release in 1969, he was eventually able to resume a career in engineering. He has always proclaimed his innocence. Julius and Ethel Rosenberg never made it into the 1980s. They were exeucted on June 19, 1953.

The world is both the same and different from the days of these famous cases. We still have the United States and Soviet Union deeply suspicious of one another. The battle of words, economies, and strategic spheres of influence operate in a manner not too unlike the years following World War II. And, there is the arms race. It is probably in this area where there has been the most dramatic change. Billions of dollars later, the stockpiles of nuclear weaponry stand at record highs, able to exterminate life many times over. That killer potential is much more sophisticated than the early atomic bomb explosions of the 1940s. So is the language of the decision makers who propose these weapons on both sides; MX, Dense Pack, Pershing Cruise, and I.C.B.M.'s are part of our vocabulary. The fear and anxiety around the political cases of the Cold War have found a new resting place in the thousands of missile silos dotting the Siberian steppes and the Rocky Mountains of this earth.

As the survivors of the cases hope for final vindication and the people of the world today look for a way out of a possible nuclear holocaust, something has happened that might ultimately affect the course of this nuclear dilemma. Mostly in the last 10 years, some startling new evidence has been uncovered in the Hiss and Rosenberg cases. It could alter millions of peoples' understanding of modern history. Through the persistent efforts of scholars, lawyers, and the defendants themselves more than 100,000 pages of declassified documents have been released from secret files in the government. Under the Freedom of Information Act (F.O.I.A.) separate court actions have forced the State Department, Department of Justice, the F.B.I., and the C.I.A. to turn over some of their materials on the Hiss and Rosenberg/Sobell cases. These records suggest another version of events that were not known to the press, public, and jury of more than 30 years ago. Few people know about them today. Some of these are for the public record, and you can decide what place they hold in your life today.

What follows is a brief summary of some of the areas contained in these files. To get a more detailed analysis of this information one should read copies of the documents that have been released. But even this short summary of some of the findings should provoke rethinking on all of our parts about who was really punished in the cases of U.S.A. v. Alger Hiss and U.S.A. vs. Rosenbergs/Sobell.

Alber Hiss believes he has a strong argument in having his case overturned. His lawyers have based his appeal on several violations alleged to have been committed by the government. Some of the more important ones are listed below.

1. Woodstock Typewriter #230,099--We now know that the typewriter introduced as evidence in the court room did not come from the Hiss household. Apparently the F.B.I. and the prosecution were aware of this but suppressed the information from the defense, misleading the jury into believing that they were viewing Hiss' actual typewriter. One can only guess where the real typewriter was or is.

2. The Pumpkin Papers--The five rolls of film that Chambers retrieved from a pumpkin in his back yard were supposed to be what Nixon had called a vital link in proving that an extensive spy organization had existed. We know now that the two strips introduced as evidence were of minor value to any espionage organization. The so-called top secret ones have been found out to be worthless. One film was over exposed and totally blank, two others turned out to be faintly legible copies of Navy Department documents relating to such subjects as life rafts, parachutes, and fire extinguishers. The jury, defense, and public never knew this, believing the prosecution's assertion of their secret nature.

3. Statements by the Prosecution's Witnesses--We now know that Whittaker Chambers made three secret statements to the F.B.I. before the trial that the defense never knew about. The prosecution claimed at the time that they had not kept anything from the defense in this regard. This was plainly not true. The Suppressed statements contained several instances of discrepancies between what he said in the trial and what he said to the F.B.I. privately, any one of which could have seriously undermined Chambers' credibility if the defense and jury had known about them.

4. Invasion of Privacy and Wiretapping--It has been disclosed that as early as 1941 the F.B.I. had Alger Hiss under close surveillance. Between then and the time of the trial there were mail covers, wire tapping, and physical surveillance of the Hiss family during daily life. The F.B.I. acted without a court order. None of this was disclosed at the trial.

The four areas of disclosures make up some of the new information we know about the Hiss case. Hiss' lawyers are trying to get more files, but the government is reluctant to release any more material.

Before we try to put these disclosures into an analytical framework let us turn to the Rosenberg/Sobell case and find out what new information has been revealed there. The revelations in this case date back to the mid 1960s. They are the result of the appeals efforts by Morton Sobell and the F.O.I.A. requests by the sons of the Rosenbergs, Michael and Robert Meerepol. These are some of the major findings:

1. The Atom Bomb Secret. In 1966 Sobell's attorneys were able to find out that the impounded sketch by David Greenglass was virtually worthless. Two distinguished scientists, Professor George Kistakowsky of Harvard and Fictor Weisskopf of M.I.T., stated at the time of the disclosure that the bomb sketch was (Weisskopf) "ridiculous, a baby drawing, it doesn't tell you anything" and (Kistakowsky) "uselessly crude."[11] Judge Kaufman and the prosecution had maintained the opposite was the case in 1951.

Even more revealing is a recently released F.O.I.A. document that has General Groves, the supervisor of the Los Alamos Project, as saying on record ". . . the data that went out in the case of the Rosenbergs was of minor value. I would never say that publicly . . . ."[12] This statement was made in 1954 and not released until a few years ago.

2. Harry Gold's Hotel Receipt. In the mid 1960s two authors, Walter and Miriam Schneir, discovered that the prosecution's exhibit of Harry Gold's hotel receipt card was in error. The prosecution entered a photo copy of the real card as an exhibit. The authors discovered, however, that there was a stamped date on the back of the actual card that the jury never saw. This date was in variance with the one on the photo copy introduced by the prosecution in the court room. According to hotel employees in Albuquerque, New Mexico, the stamped date was the date of whoever stayed in the hotel that night. This new fact undermined Gold's claim that he stayed in the hotel on the date he allegedly received information from Greenglass.

3. Judge Kaufman's Behavior. Some disturbing facts have been revealed regarding Judge Kaufman's behavior in the Rosenberg/Sobell trial. Contrary to his assurances he "privately indicated during the course of the trial before the jury had rendered a verdict that he would impose a death sentence upon conviction."[13] He also

communicated to the F.B.I. that any appeal by the Rosenbergs should be denied, no matter what the merits of the case might be. Furthermore he held secret conversations with the prosecution regarding the types of sentences he was going to impose and held other secret talks with the prosecution saying he intended to deny any appeals by Sobell while in prison. Judge Kaufman was requested at the time of the disclosures (1976) to answer these charges and open up his files to public scrutiny. He has never replied to the demand.

4. Secret Deals by the F.B.I. and C.I.A. Shortly before the execution of the Rosenbergs the C.I.A. suggested to the F.B.I. that a plan be adopted to get the condemned couple to make a deal with the Government. They wanted to appeal to their Jewish origins by convincing them that the Soviet Union was "bent on exterminating the Jews under its soveriegnty." They wanted the Rosenbergs to appeal "to Jews in all countries to get out of the communist movement and seek to destroy it."[14] The rest of the document revealed a calculated and cynical proposal on how the government could gain the sympathies of the Rosenbergs to accomplish this end. If the Rosenbergs cooperated, their death sentence would have been commuted. Obviously, the scheme never worked if it had been tried.

These areas of disclosure are startling, whatever one thinks about the guilt or innocence of the accused in the Hiss and Rosenberg cases. They tell a story that has only been publicly known since the late 1970s. The information presents a strong challenge to our previous interpretations of the cases and their relationship to the dawn of the nuclear arms race. The new material strongly calls for a reopening of the cases. In this regard it raises a host of questions about Constitutional guarantees during times of stress in this nation's history. That in itself is significant and thought provoking. But this information also brings another focus on how we have understood our nuclear history.

There are six questions offered as starting points for your consideration. They deserve serious thought and some soul searching on all of our parts. Perhaps they are the kinds of questions that will remain with us for the rest of our lives.

1. If the public knew this information in 1949 or 1951, would the credibility of the entire "espionage fever" been seriously diminished?

2. If Hiss and the Rosenbergs were innocent, would the rationale for the rapid arms build up by the United States government have been seriously undermined?

3. Do you feel that either fear and hysteria were motivating factors in getting the public to endorse a nuclear arms build up? If so, how might the two cases fit into this dynamic?

4. Does the public have a right to access of the formally top secret documents relating to these cases and the early decisions to begin an expanded nuclear arms program? Why or why not?

5. Does this information have any value for the nuclear arms dilemma today? Are the assumptions of today connected with the trial verdicts in our past?

6. What should be done now? What are the responsibilities entailed in knowing about this information when deciding policy about our nuclear future?

However you attempt to answer these questions your conception about who the victims were in the cases and who the survivors are in our nuclear age must be altered to some degree. If the Rosenbergs, Sobell, and Hiss were innocent, then we can surely say that they were caught up in a tragedy of great dimensions. Whether guilty or innocent, the role of methods the government and prosecution in the case prompts some people to wonder if the larger society also was victimized. Not knowing key facts and relevant disclosures at the time of the trial kept an entire society unaware of these hidden but important dimensions in the trials. This ignorance fueled the panic and affected the judgment on the degree of seriousness there was in the threat to the nation's security. The perceptions of the time remain embedded in a foundation of rumor, half-truth, and it seems even some out right lying. We must try to measure the degree to which these perceptions of the accused, the Soviet Union, and the arms race were immutably shaped by a diet of what could in the end amount to an era of disinformation.

Certainly, there are no easy answers. Yet it is much more comforting to our democratic ideals and sense of survival today if we can have a more complete picture of the crucial events that transpired around and in the Hiss and Rosenberg cases. How can we determine our fate in this nuclear age, if we do not know our past? Are we not all victims of a hoax on history then? As citizens of democracy, we must have the required public forums to discuss and analyze the questions put forward in this chapter. We must face their implications with sober minds and should not be afraid to deal with the consequences of "knowing." How do you feel when somebody suggests that your government is wrong? What does this feeling have to do with patriotism?

Alger Hiss and Morton Sobell survived. Julius and Ethel Rosenberg died. Living through the nuclear age makes survivors out of all of us in a way. Whether we like it or not, the issues in these political cases have touched all of our lives today. We continue to live in the shadow of a great nuclear holocaust. Let us hope that the fateful decisions being contemplated by our policy makers and presented to the citizenry can be made in a climate of critical thinking and open inquiry. It seems that being a victim or a survivor should be a decision we all face together with a complete understanding of how the dangers of the past can press in on our future.

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Connections

1. Choose any one or group of the six questions and structure a debate around them. Any of the questions discussed in depth requires further research by the participants. The debate need not be in "either/or" terms. The teacher and students can decide ahead of time what likely categories of answers there might be. Once this is done teams of 3-5 students can research their position in the library with the help of the teacher.

The purpose of the debate goes beyond which side presents the best argument. Students should be attuned to listening to other sides' positions and be appeciative of the work they put into their side. The questions have a significance that allows the real value in the debate to come from the different perspectives that have been carefully thought out and clearly expressed. Answers to these kinds of questions are best reached through the airing of a wide variety of feelings and interpretations before peoples' minds are made up. Every one gains by being exposed to this kind of situation.

2. On Social Responsibility:

After the debate discuss what the responsible behavior should be by citizens when confronted with this new information. Try to articulate the different possible actions citizens should take, especially in regard to making decisions on the nuclear arms race.

As a class discuss the scope and the means by which effective responses to this data can be carried out in our society. Define what responsibility means in this context.

3. Choices for You:

Each person should reflect on what this material means for their own individual lives. Students can write about the aspects of the reading that moved them the most. This could be done in the form of a journal or a short paper. It can be more than an intellectual response, including your feelings in a very personal way. Attempt to relate the past to the present in your writing. Can you accept the term victim or survivor for yourself?

Footnote References:

1. Walter and Miriam Schneir, Invitation to an Inquest (Garden City: Doubleday Comp., 1965), p. 43.

2. Ibid, pp. 43-44.

3. David Caute, *The Great Fear* (New York: Touchstone Press, 1979), p. 471.

4. Schneir, pp. 45-46.

5. Ibid, p. 45.

6. Tom Goldstein, "U.S. Releases Copies of 'Pumpkin Papers'" *New York Times* (New York), August 1, 1975, p. 5.

7. Schneir, p. 52.

8. Ibid., p. 53.

9. Allen Matusow, *Joseph R. McCarthy* (Englewood Cliffs: Prentice Hall Inc. 1970), p. 19.

10. Schneir, p. 70.

11. Alvin Goldstein, *The Unquiet Death of Julius and Ethel Rosenberg* (New York: Lawtence Hill and Company, 1975), p. 7.

12. *De-Classified F.B.I. Memo to Attorney General William Rogers*: May 14, 1954 (Courtesy of Marshall Perlin, New York, Jan. 1983)

13. National Committee to Re-Open the Rosenberg Case, *The Kaufman Papers* (New York: New England Free Press, 1977), p. 1.

14. *De-Classified C.I.A. Memo*: February 2, 1953 (Courtesy of Marshall Perlin New York, Jan. 1983)

Film: "The Trials of Alger Hiss":
by John Lowenthal
Direct
Los Angelos, CA

A 2 3/4 hour documentary overview on the background and evolution of the case. It uses personal interviews with survivors and puts forward some new evidence that has been uncovered since the release of thousands of F.O.I.A. in the mid 1970s.

Activity 12: The Super

The hydrogen bomb, known to scientists as the 'Super', is so powerful that it takes the explosive force equal to the Hiroshima weapon to detonate it. Theoretically, there is no limit to the power of a hydrogen bomb. The scientists who first worked on them had to reassure themselves that they would not actually begin a chain reaction in the earth's atmosphere that would turn this planet into a fire ball. Hydrogen weapons have been tested with an explosive force equivalent to 3,700 times the force which destroyed a city of 160,000 people.

As early as 1944, scientists believed they could make a hydrogen bomb. But the technical problems involved were so staggering that nothing was done. After the war, work on the super was put off because scientists, sobered by the destruction visited on Hiroshima and Nagasaki, had no stomach for making even more powerful weapons. Besides, they believed the US had a clear cut lead in the production of nuclear weapons. The optimists thought it would take the Soviets at least fifteen years to catch up. The pessimists estimated the lead at only ten years.

Suddenly, in August, 1949, the Soviet Union exploded a technologically sophisticated nuclear device. America's lead was now presumed to be less than four years. Fear that the Soviets could soon match the United States bomb for bomb led to resumed interest in the 'Super'. Even the author of the Baruch Plan, advocated the hydrogen weapon by posing this rhetorical question: "If you knew of any instrumentality to defend you life, would you not get it?"

However, many of the scientists who had worked on the atomic bomb were not convinced that the United States should make weapons a thousand times more powerful. Rather than work on bombs that could destroy civilization, these scientists wanted to head off an escalation of the arms race. By refraining from developing the 'Super' they thought the US could get the USSR to exercise similar self-restraint. Having a lead in one category of weapons, they had learned, did not assure the United States that the Soviet Union would not try to catch up.

In the debate over making the hydrogen bomb, two towering figures stand out, Jr. Robert Oppenheimer and Edward Teller. Both were scientists whose backgrounds, personalities, philosophies and achievements came to symbolize their diametrically opposing views. Both were brilliant and made outstanding contributions in theoretic and applied nuclear physics. This chapter will present the views of these scientists in the context of their lives and achievements.

Oppenheimer and Teller

It was P. Robert Oppenheimer, director of the project that made the first atomic bomb who later opposed the H-bomb. Oppenheimer was born in America to well-to-do parents, and never lacked for anything, money, materials comforts, friends, or the best education. In contrast, it was Edward Teller, the Hungarian born physicist, who wanted his adopted country to maintain its overwhelming superiority in nuclear weapons.

Oppenheimer attended Harvard College and later taught at the University of California. Teller was educated in Europe and emigrated to the United States in 1935. During the time that Teller was adopting America as his homeland, Oppenheimer was exploring communism and the Communist Party. Both his brother and his wife were members, and Oppenheimer frequently gave money to left-wing causes supported by the Party. Teller, who had lived in a land later ruled by the Soviet Union, was a staunch anti-communist all of his adult life.

Oppenheimer's work in nuclear physics put him in the forefront of his profession. His success in directing the Los Alamos atomic bomb project, 1943-45, however, was due as much to his organizational ability and personal charm as to his work in physics. As director of and mid-wife to the world's biggest and most ambitious project, he alternately played the role of recruiter, trouble shooter, father confessor, and councilor. Shortly after the war, Oppy (as he was known to his friends) immersed himself in brain-childing the Baruch Plan, which in its original form was much more conciliatory on the two issues to which the Soviets objected, than the plan presented before the United Nations. Afterwards, Oppenheimer headed the Atomic Energy Committee, consulted with the US Government on nuclear weapons, and directed Princeton's prestigeous Institute for Advanced Studies. In these various capacities he strenuously opposed the development of the hydrogen bomb, until it became all but evident that the decision for the bomb had already been made.

Edward Teller was one of the scientists recruited by Oppenheimer in 1943. Like so many others in Los Alamos, Teller fell under the influence of Oppy's personal warmth and charm. Unlike others, however, Teller was fascinated by the possibilities of a hydrogen bomb, and became disgruntled with Oppenheimer's lack of interest in his pet project. Teller's efforts to recruit his own team to work on the Super were not supported by Oppenheimer in his role as Director of the Los Alamos Project, and later on the A.E.C. Thus, while Oppenheimer basked in the sunlight of his many successful efforts, Teller experienced years of frustration in even getting the help and support he needed to work on his own project. Ultimately, it was despite and not because of Oppenheimer that Teller got the funds and laboratory he needed, and used to complete work on his Super, nine months before the Soviets fired theirs.

Should We Build the Bomb

The most important disagreement between Oppy and Teller was the question of making the Super. For Edward Teller, there were no serious reservations, and an urgent reason for beginning immediately. Writing in the Bulletin of Atomic Scientists in March, 1950, he put the matter simply:

> to my mind we are in a situation not less dangerous than the one we were facing in 1939 (at the start of World War II) and it is of the greatest importance that we realize it. We must realize . . . that democracy will not be saved by ideas alone.

Urging reluctant scientists to work with him on the hydrogen bomb, Teller pleaded:

> Hydrogen bombs will not produce themselves. Neither will rockets or radar. If we want to live on the technological capital of the last war, we shall come out second best.[1]

Oppenheimer served as Chair of the General Advisory Committee to the A.E.C. In this capacity he signed the following statement in his committee's unanimous report against producing the hydrogen bomb?

> We base our recommendation on our belief that the extreme dangers to mankind inherent in the proposal wholly outweigh any military advantage that could come from this development. Let it be clearly realized that this is a super weapon; it is in a totally different category from an atomic bomb. The reason for developing such super bombs would be to have the capacity to devastate a vast area with a single bomb. Its use would involve a decision to slaughter a vast number of civilians. We are alarmed as to the possible global effects of the radioactivity generated by the explosion of a few super bombs of conceivable magnitude. . . . a super bomb might become a weapon of genocide. . . .
>
> We believe a super bomb should never be produced. Mankind would be far better off not to have a demonstration of the feasibility of such a weapon . . .
>
> In determining not to proceed to develop the super bomb, we see a unique opportunity of providing by example some limitations on the totality of war and thus of limiting the fear and arousing the hopes of mankind.[2]

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[1] Quoted in Stanley A. Blumberg and Gwinn Owens, Energy and Conflict: The Life and Times of Edward Teller (New York: Putnam's Sons, 1976).

[2] Quoted in Herbert York, The Advisors: Oppenheimer, Teller, and the Superbomb (San Fransisco: W.H. Freeman and Company, 1976).

The decision not to produce the super bomb according to this report, however, was conditional "on the response of the Soviet Government."

How Much of a Weapons Lead is Enough

Another major difference between Oppy and Teller was the importance of the US staying far ahead of the Soviets in the arms race. Teller thought it important to maintain a commanding lead. Oppenheimer felt it would make little difference in the long run for the United States to be ahead by several thousand weapons.

Below, Teller talks about Oppenheimer's role in not maintaining America's lead in the arms race:

> I am convinced that if, after Hiroshima, men of Oppenheimer's stature had lent their moral support-not their active participation, but only their moral support-to the thermonuclear effort, the United States would have shaved four years from the time it took this country to develop a Super bomb. But the thermonuclear work was given almost no support in the last months of 1945 or in 1946, 1947, or 1948. Many physicists and government officials were convinced that in the atomic bomb America had the weapon ideally suited for our policy of massive retaliation. The people were comforted by published pronouncements that Soviet Russia could not attain an atomic explosion for at least twenty years. Some leaders felt that work on advanced weapons would make the United States appear to be a warmongering nation bent upon a world arms race. Then, in the fall of 1949, Russia's first atomic explosion made us realize that an arms race was no longer a possibility to be avoided but a frightening reality to be faced.[1]

For Oppenheimer nuclear supremacy offered no security:

> . . . The very least we can say is that, looking ten years ahead, it is likely to be small comfort that the Soviet Union is four years behind us, and small comfort that they are only half as big (in weapons) as we are. The very least we can conclude is that our twenty-thousandth bomb will not in any strategic sense offset their two-thousandth.[2]

---

1. Quoted in Edward Teller with Allen Brown, The Legacy of Hiroshima (New York: Doubleday, 1962), p. 42.

What are the Social Responsibilities of the Scientist?

Edward Teller's greatest quarrel with Oppenheimer stemmed from the American born physicist's discouraging scientists from working on the Super. Teller could point to several occasions when physicists who had agreed to work for him changed their minds after talking to Oppy. While denying these specific charges, Oppenheimer admitted to sometimes regretting his role in making the Hiroshima bomb. He did not want to compound this mistake by supporting work on the Super. His feelings were summarized in this famous and frequently quoted statement:

> In some sort of crude sense which no vulgarity, no humor, no overstatement can quite extinguish, the physicists have known sin; and this is knowledge which they can not lose.[3]

Teller was distrubed by Oppy's moralizing as well as by his great influence in the community of American acientists. To combat this influence, Teller wrote an article in The Bulletin of American Scientists stating his own views:

> The scientist is not responsible for the laws of nature. It is his job to find out how these laws operate. It is not the scientist's job to determine whether a hydrogen bomb should be constructed, whether it should be used, or how it should be used. This responsibility rests with the American people and their chosen representatives.[4]

Was Oppy a Security Risk?

Others besides Edward Teller were angered by Oppenheimer's opposition to making the Super bomb. Among those so affected, were high officials in the US Air Force. It seemed that Oppenheimer also opposed Air Force doctrine that the hydrogen bomb should be assigned to it in the role of a first strike weapon. A major section of an important strategy planning report, written by Oppenheimer, reflected his views that the hydrogen bomb should only be used as a retaliatory and not a first strike weapon. Air Force personnel regarded these views as an extension of his already suspect opposition to developing nuclear armaments. To check these perceptions, the Air Force sent its chief science advisor, David Griggs to meet with Oppenheimer. The meeting degenerated into a name calling contest after Oppy characterized one of Griggs' statements as 'paranoid'. Griggs returned to Washington, convinced that

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3. Quoted in Herbert York, op. cit., p. 47.

4. Quoted in Blumberg, op. cit., p. 248.

Oppenheimer was a security risk. About this time, the sensational story broke that a British scientist, Klaus Fuchs, admitted passing nuclear secrets to the Soviets. Later two American scientists, Julius and Ethel Rosenberg were accused, indicted and convicted of similarly revealing nuclear secrets to Soviet agents. Since Fuchs supposedly had an accomplice in Los Alamos, Oppenheimer was suspected. Suddenly his past associations with the Communist Party, contributions to communist causes, support for the Baruch Plan, and opposition to the Super seemed to fit a pattern. The man whose genius had guided the Manhattan Project and built the world's first Atomic bomb, was suddenly a suspected spy and traitor.*

Asked to investigate the activities of this controversial scientist, the FBI put him on round the clock surveillance. Former acquaintances were questioned to find evidence of his passing secrets, plotting with Soviet agents, or attempting to undermine America's nuclear programs. Enough evidence was eventually dredged up to convince FBI investigator William Borden, that the odds were that Oppenheimer was not only a security risk, but a Soviet agent.

After much political infighting, the Atomic Energy Commission's Personnel Security Board was chosen to hear the charges against Oppenheimer. The three man Board was charged only with deciding whether Oppenheimer was a security risk and should be denied access to government secrets. The more serious espionage charges were not based on sufficiently credible evidence to warrant a jury trial. Hearings on the Security Board began on May 27, 1954, and continued for one month.

By several accounts of the lengthy proceedings in the "Matter of J. Robert Oppenheimer," Dr. Teller's testimony was the most damning. Asked whether he thought his former boss was a security risk, Teller responded:

> In a great number of instances, I have seen Dr. Oppenheimer act--I understand that Dr. Oppenheimer acted--in a way which for me was exceedingly hard to understand, and his actions frankly appeared to me confused and complicated. To this extent I feel I would like to see the vital interests of this country in hands which I understand better and therefore trust more.
>
> If it is a question of wisdom and judgement, as demonstrated by actions since 1945, then I would say one would be wiser not to grant clearance.[1]

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*Oppenheimer had once been asked to supply a friend who was a communist with classified security information. Though he had denied the request, he waited years before reporting this incident, and even then withheld the person's name until practically forced to reveal it.

[1] Quoted in Peter Goodchild, J. Robert Oppenheimer: Shatterer of Worlds (Boston: Houghton Mifflin, 1981), p. 254.

Verdict and Aftermath

In a decision that is still controversial, the Personnel Security Board voted 2:1 to deny Oppenheimer security clearance. This ended his work for the US Government.

Though gratified by world wide expressions of support, Oppenheimer was shaken by the lengthy hearings and the discouraging verdict. Despite this setback, Oppenheimer continued to play a vital role in science as Director of Princeton's Institute of Advanced Study. His contributions and international stature were recognized nine years later when President Lyndon Johnson awarded him the Enrico Fermi medal. Oppenheimer had been recommended for the honor by the previous years' winner, Edward Teller. After the ceremony, the two protagonists shook hands warmly, and thus symbolized the end of the often bitter feud between them and their followers.

In 1952, long before the hearings in the Oppenheimer case, Teller successfully completed his work on the hydrogen bomb by detonating the world's first thermonuclear explosion. The Soviet Union followed in less than a year with a more advanced, technically superior device, all but eradicating America's lead in nuclear weapons. As we know, the arms race continued--weapons of more than 50 megatons have been made and tested. The competition in more recent years has been in the delivery vehicles or launchers rather than in the size or explosive capacity of nuclear and thermonuclear weapons. The search for greater security through more accurate and effective weapons of mass destruction continues. One wonders whether the jury perhaps has not yet returned a verdict in the deeper, philosophical issues symbolized by the lives and convictions of Robert Oppenheimer and Edward Teller.

Activity 13: Exercises:

1. Identify and/or briefly explain the relationship to the chapter of each of the following:

   a. Teller's personal background, b. Oppenheimer's background, c. Communist Party, d. Baruch Plan, e. the Super, f. Atomic Energy Commission and Manhattan Project, g. David Griggs, h. William Borden, i. 'personally secure'

2. What do you think about the following:

   a. waiting to develop the Super?
   b. does anyone need a weapons lead?
   c. the social responsibility fo the scientist?
   d. was Oppenheimer a security risk?

3. a. Prepare a brief to use against Oppenheimer on his security hearing.
   b. Prepare his defense in the security hearing.

4. What do you think of Teller's testimony? Does it seem appropraite?

Activity 14: The Arms Race: An Overview

Introduction:

> (T)he United States has been brought by its own civilian leaders, to a position of military inferiority to the Soviet Union. At this moment, you and your loved ones stand exposed to physical destruction. The option of whether you shall live or die rests primarily with the hardened men who occupy the Kremlin. . . . Their ultimatum, when it comes, will place on the shoulders of our leaders the terrible decision to fight a thermonuclear war we cannot win or to hand over the American people to an oligarchy of tyrants whose viciousness and brutality have no match in the long, bloody history of man's cruelty.[1]
>
> General Lewis Walt, United States Marines

There are other views on the arms race other than General Walt's. One that runs counter to the General's holds the United States at least partially at fault for the arms races. It understands most of the Soviet's actions as defensive, rather than offensive; and argues that fair and mutually beneficial arms reduction treaties can and must be negotiated with the Soviet Union because continuation of the arms race has not and cannot make us more secure.

Read the following pages to help you determine to what degree these two views are supported by the facts.

The Strategic Balance Following World War II

During World War II, the United States was the only nation in the world which played a decisive role in both the Atlantic or European and Pacific or Asian theatres of war. Having suffered relatively few battle casualties (290,000) and with its homeland all but untouched, the United States was the most powerful nation on earth. No country could match the firepower of its armies, the combat readiness of its Air Force, or the size and versatility of its Navy. Furthermore, the United States was the only nation to have unlocked the mystery of the atom, as witnessed by the smouldering ruins of Hiroshima and Nagasaki.

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[1] General Lewis Walt, The Eleventh Hour (Ottowa, Illinois: Caroline House Publishers, Inc., 1979).

But the United States was not the world's only super power. Despite terrible devastation and the loss of 20,000,000 killed, the Soviet Union emerged from World War II stronger than ever before. The Soviets had engaged four out of every five German soldiers that fought in the war. Soviet soldiers with their own tanks, guns and planes drove Hitler's mighty armies out of the USSR, and back into Germany. Military strategists in America, recognized the power of the Red Army, and realized its effects on the post-war balance of power. For instance:

> We . . . know that the USSR has a powerful land force, in being today on the Eurasian continent. . . . We know that, today, if we wanted a numerical land power equality with this Russian force, we would be required to maintain an army on the continent of Europe as large as the one we built for WWII.[2]

The author of the previous statement, General Orville Anderson, was forced into early retirement for advocating the United States threaten the Soviet Union with nuclear destruction if it did not start pulling out of Eastern Europe. Using these kind of threats did not become official US policy. But, it is a known fact that the balance of power after World War II depended on the US possessing nuclear weapons to counterbalance the Soviet Union's mighty armies, seemingly prepared to strike either in Europe or Asia. The Soviets never left the countries they freed from Hitler's armies, nor did they disband their huge armies. Only US B-29's armed with atomic bombs could stop the Soviets, if they decided to invade Western Europe or Asia.

The USSR Gets the Bomb

The Soviets, of course, knew that the United States had the bomb and they didn't. Their way of dealing with this threat was to pretend it didn't exist, while secretly working as fast as possible to make their own atomic bombs. At the same time, they tried to defend their country from nuclear attack.

Soon after World War II, the Soviets began producing Mig-15 interceptor fighters, capable of crippling American B-29's. Eventually, they made 15,000 Migs. Meanwhile the Soviets set elaborate radar defenses around their major cities, and along their borders. The bombers they built during this period, the Tu-4, were medium range and not intercontinental bombers. As such they were capable of destroying American bases along their borders, but not able to reach American cities.

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[2] General Nathan F. Twining, Neither Liberty or Safety (New York: Holt, Rinehart and Winston, 1966).

Much to the alarm of the US, the Soviets exploded their first A-bomb, in August, 1949. This was ten to fifteen years before American experts thought the Soviet Union would develop this weapon. Four years later Soviet scientists tested a hydrogen bomb, now only nine months behind the US. Unlike America's, The Soviet's first H-bomb was small enough to carry in a plane. This meant that America's lead in nuclear and thermonuclear weapons, once thought to be over one dozen years, was now reduced to less than nine months. The US could no longer rest assured that superior nuclear technology could make up for the USSR's larger armies, and strategic location.

The Bomber Gap

While Americans once underestimated Soviet science, they now corrected by overestimating its engineering and production. Information had come to the US that the Soviets had developed two new planes, the Bison and the Bear. Fearing that these planes would soon be capable of bombing American cities, the US stepped up production of its B-36's and B-47's, both improvements over the trusted B-29. Meanwhile, the US began securing bases from which to fly its new planes. First Great Britain, Spain, French Morocco, and Canada agreed to provide military airports. Later, Japan, Iceland, and Turkey also hosted American nuclear bombers. Soon the US formed its famous Strategic Air Command (SAC). General Curtis LeMay, known for firebombing Tokyo in 1945 was made commander of this new strike force. In the 1950s, the US began production of its B-52 bombers. These winged superfortresses, improved and remodeled year after year, still serve the US in the 1980s. Their bases were protected by radar installations, and the planes themselves were either kept flying or were on two hour alert. (In the missile age, each of these planes either are or could be in the air in fifteen minutes). Back home, Americans were told to build fall-out shelters, and stock them with at least two week's supply of food and medicine. Some bought guns to keep unwanted neighbors out of their shelters. At school, children were taught to hide under their desks, or stand in darkened corridors during mock air raid drills.

Once the US knew that its enemy had the bomb, it began to mass produce it. The US made only fifty bombs a year during the first three years of the nuclear age. Then the Soviets exploded their bomb. Production was quickly sped up to 300 bombs a year. The 9,000 nuclear warheads the US has today indicates that this rate of adding new weapons to the stockpile has been maintained for thirty years. The pace of nuclear weapons tests also increased. There were two in 1946, and none in 1947. By the end of 1953, however, the US had completed 42 atmospheric tests.

As we have seen, America produced and equipped a large fleet of nuclear bombers to counter what it thought would be a Soviet threat. Surprisingly, the Soviets never made the large fleet of intercontinental bombers they were expected to produce. Thus the predicted 'bomber gap' never materialized.

The Soviet Union, however, did break new ground in the arms race in 1957 by putting the first man-made satellite into orbit around the earth. It quickly followed this dramatic success with a much larger and more ominous Sputnik II. Assuming that this lead in rocketry would soon put the US at the Soviet's mercy, America began a crash program to catch up. As we shall see in the next chapter, the US rapidly outstripped the USSR in both space technology and in numbers of missiles. But one cannot help but wonder whether America's rapid deployment of bombers in the 1950s and missiles in the 1960s, caused the Soviet Union to redouble its efforts in these areas. This of course raises the question whether either side can be satisfied with its weapons as long as it is either behind or losing ground. In short, can either side ever have enough?

Brinksmanship

For over twenty years, the US was clearly ahead of the USSR in both nuclear weapons, and the means of delivering them. During these years the US often flexed its nuclear muscles at the Soviet's expense. While Harry Truman was president, 1945-53, this threat of nuclear retaliation was not pronounced publicly. It was enough for the Soviets to know that the US had the bomb and could use it. When General Douglas MacArthur publicly called for using the Bomb on Chinese forces fighting the US in Korea, Truman fired him. But, three years later, President Dwight Eisenhower and his Secretary of State John Foster Dulles announced a much more nuclear oriented foreign policy. They called it the 'New Look', but it was equally well known by the term, 'brinksmanship'. Prompted partially by a desire to save money, this policy depended heavily on atomic bombs and artillery, which gave the US a greater 'bang for the buck' than conventional weapons. As Dulles put it, the US should "depend primarily on a great capacity to retaliate instantly by means of our choosing." The 'means' to which Dulles referred, were America's nuclear weapons.

In an international crisis, Dulles believed, the US should bring all pressure to bear on the enemy to get it to back down. This would involve using the threat of nuclear war. This threat, Dulles argued, required nerves of steel. He called it a

> . . . necessary art . . . If you are scared of going to the brink, you are lost.[1]

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[1] Quoted in John M. Blum et. al., The National Experience (New York: Harcourt Brace Jovanovich, Inc., 1977), p. 748.

Disarmament, Disengagement, and the Test Ban

Though it would be difficult to cite examples of Dulles actually playing an international game of chicken with the Soviets, his brinksmanship policy had some unintended ill effects. For example, it relied so heavily on nuclear weapons, that it caused the Eisenhower administration to become less than open to Soviet offers to disarm. As a result the United States failed to explore several very encouraging Soviet peace initiatives during the 1950s. In one case the US actually withdrew a publicly stated commitment to disarmament after the Soviets seemed to accept its previously stated proposals.

In meetings with the USSR in March of 1955, US disarmament negotiator James Wadsworth announced his country's willingness to negotiate the "complete prohibition and elimination of nuclear weapons,"[2] a stand the US had taken since introducing the Baruch Plan in 1946. On May 10, 1955, the USSR unveiled a strikingly changed position on the issue of arms control and disarmament. It offered to reduce both its conventional and its nuclear weapons. Furthermore, the Soviet proposal included an offer to allow unhampered inspection of its territories by neutral observers prior to complete disarmament. In other important details, the new Soviet position closely duplicated stands previously taken by the US.

The importance of the new Soviet initiative was temporarily overshadowned by the Geneva Conference that brought President Eisenhower and Soviet Premier Khrushchev to Switzerland in July, 1955. Eisenhower's proposal for 'open skies' aerial surveillance of the US and USSR received the headlines and caught the imagination of the world. But this proposal was a step backwards from the far more comprehensive disarmament plan endorsed by the Soviets. A few days after the Geneva Conference ended and the disarmament sessions reconvened, US negotiator Harold Stassen announced his nation's change of heart, "(t)he United States does now place a reservation upon all its pre-Geneva substantive positions taken in this subcommittee or in the Disarmament Commission in the UN on those questions in relationship to levels of armament."[3]

Negotiations on the new Soviet proposals were delayed for five months while the US reformulated its position on disarmament. When they finally resumed, the USSR proved quite cooperative. Great progress was made on the timing of inspections and reduction of conventional forces. Hopes, however, were dashed in August, 1957, when the Soviet negotiator suddenly launched a verbal attack on the United States, for among other things arming its European allies (including West Germany) with nuclear weapons.

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2. Richard J. Barnet, Who Wants Disarmament (Boston: Beacon Press, 1960), p. 38.

3. Richard J. Barnet, op. cit., p. 37.

While the US was preparing to arm Germany with nuclear weapons, Poland's Foreign Minister Adam Rapacki offered an intriguing plan. It called for establishing a nuclear free zone in central Europe, including Czechoslovakia, East Germany and West Germany, as well as his own country. Another disarmament proposal was offered by Premier Khrushchev. He suggested that East and West Germany should be allowed to again become one country, provided they agreed not to station foreign troops on their soil. The Eisenhower administration dismissed both of these initiatives as 'communist propaganda', and insisted that the two Germanies be allowed to reunite without such preconditions. Knowing that a united Germany would ally itself with the US, Khrushchev rejected this proposal. As a result of this impass, there neither is a nuclear free zone in Europe, nor a united or a unified Germany. On the contrary, the US and the USSR have armed this still divided country against itself.

In contrast to the aforementioned disarmament issues, some real though painstakingly slow progress has been made in banning nuclear tests. The first notable international opposition to nuclear weapons testing was triggered in 1954 by the death of Japanese fishermen who sailed too close to America's nuclear test sites in the Pacific. To dramatize their opposition to these tests, pacifists steered their small boats into areas where further tests were scheduled. Sensing the propaganda value of such a move, the USSR proposed a joint test ban treaty with the US. Fearing America could lose its lead in nuclear weapons and that the Soviets would cheat, the Eisenhower adminstration opposed this move.

Again seizing the initiative, Premier Khrushchev called for a suspension of nuclear tests in 1958. When the US failed to join him, he announced a unilateral suspension. The United States denounced this initiative as a propaganda ploy, completed its own series of tests, and followed suit. At the same time, the US bowed to pressure from allies and neutral nations and participated with Soviet and British experts in scientific studies on detecting nuclear tests. They concluded that atmospheric tests could be readily detected.

The question still remained whether seismographic recorders could distinguish low yield underground tests from natural phenomenon like earthquakes. Fearing they could not, the US refused to sign a treaty banning underground nuclear tests unless the Soviets agreed to allow inspectors search for suspected violations. With their habitual opposition to exposing themselves to foreign examiners, the Soviets at first refused. After some five years of negotiation, the USSR agreed to allow a maximum of three on-site inspections annually. US negotiators would allow no fewer than seven. This impass delayed the signging of a test ban treaty for five years. In the last year of his life and presidency, 1963, John F. Kennedy signed the much delayed treaty with the Soviet Union. But the treaty only prohibited nuclear tests in outer space, the earth's atomosphere, and underwater, where they readily could be detected.

Underground testing was not prohibited in 1963, or since. For the last nineteen years, therefore, the USSR as well as the US have been able to improve their stockpile of small but deadly and efficient tactical nuclear weapons. These tests allowed both sides to develop small warheads used in MIRVing ballistic missiles vastly improving their killing power. Continued underground testing has also allowed both sides to develop atomic artillery. Both sides possessing such weapons increases the likelihood of a war initially fought with conventional weapons escalating into a nuclear holocaust. The controversial 'neutron bomb' known for its ability to kill people but not destroy property and valued as a battlefield weapon, was also tested in underground explosions. Even today (1982), with the technical questions regarding inspections of underground weapons resolved, the US Senate has not ratified a pact prohibiting underground tests.

Activity 15: Student Exercises:

1. Identify or define and briefly explain the relevance to the chapter of each of the following:

   a. General Walt, b. Red Army, c. Orville Anderson, d. Mig-15, e. Tu-4, f. H-bomb, g. 'bomber gap', h. B-52's, i. brinksmanship and 'New Look' foreign policy, j. 'open skies' k. Harold STassen, l. Rapacki Plan, m. Test Ban Treaty, n. underground testing.

2. On balance, do you think that either the US or the USSR gained from continued weapons testing, either in the atmosphere or underground? Explain.

3. Imagine you were a Soviet politician at the time that the US first exploded a nuclear weapon. What course of action would you recommended your government take?

4. Does this chapter suggest that either the Soviets or the US (or both) was reluctant to fully pursue arms limitations? Do you feel you can draw your own conclusions from the information presented here? Why or why not?

Connections:

The Arms Race: An Overview

This lesson covers a fifteen year span in the Arms Race, from the collapse of the Baruch Plan talks, to the nuclear test ban treaty. It shows how both sides tended to escalate the Arms Race.

Two important issues are raised in this reading--first, did one country, America or the Soviet Union, seem more bent on arming itself?--(and did this, in effect, force the other to try and catch up?) and, second, did one nation try harder to make meaningful attempts to stop the Arms Race than the other? Students can be assigned on the basis of previous commitments to issues discussed in class; a more exciting, technique here would be to expect students to take the opposite positions from those they had argued previously.

The First Strategic Arms Limitation Talks

This is the first of two lessons preparing students to negotiate the SALT II agreement, playing the roles of experienced arms negotiators in the Soviet and American delegations. In preparation, students can read the history of the supposed missile gap which never materialized, America's decision to allow the Soviets to more or less catch up, the 1962 Missile crisis, and the issues resolved and left unresolved in the SALT I Treaty.

Disucssion in this unit might be focused on two issues--first, whether the Soviets were justified in gambling by establishing a missile base in Cuba--and, secondly, whether the US gave away too much in SALT I. Teachers should also assure themselves that students understand such key terms as MAD, missile gap, 'rough parity', etc. Last ten minutes of class should be devoted to preparing students for the SALT II simulation. A list of roles each student will be assigned is an important part of this preparation.

Activity 16: Mutually Assured Destruction

Out of the "cold war" and the increase in nuclear weapons systems that was part of it, came an American military strategy known as Mutually Assured Destruction, or M.A.D. Its realities were outlined in a speech by President Eisenhower before the United Nations on December 8, 1953:

> Today. the United States stockpile of atomic weapons. which, of course, increases daily exceeds by many times the explosive equivalent of the total of all bombs and all shells that came from every plane and every gun in every theater of war in all of the years of World War II.
>
> A single air group, whether afloat or land-based, can now deliver to any reachable target a destructive cargo exceeding in power all the bombs that fell on Britain in all of World War II.

Atomic weapons have virtually achieved conventional status within our armed forces. . . .

But the dread secret, and the fearful engines of atomic might, are not our alone.

In the first place, the secret is possessed by our friends and allies, Great Britain and Canada, whose scientific genius made a tremendous contribution to our original discoveries and the designes of atomic bombs.

The secret is also known by the Soviet Union. . . .

If at one time the United States possessed what might have been called a monopoly of atomic power, that monopoly ceased to exist several years ago. Therefore, although our earlier start has permitted us to accumulate what is today a great quantitative advantage, the atomic realities of today comprehend two facts of even greater significance.

First, the knowledge now possessed by several nations will eventually be shared by others--possibly shared by all others.

Second, even a vast superiority in numbers of weapons, and a consequent capability of devastating retaliation, is no preventive, of itself, against the fearful material damage and toll of human lives that would be inflicted by surprise aggression.

The free world, at least dimly aware of these facts, has naturally embarked on a large program of warning and defense systems. That program will be accelerated and expanded.

But let no one think that the expenditure of vast sums for weapons and systems of defense can guarantee absolute safety for the cities and citizens of any nation. The awful arithmetic of the atomic bomb does not permit of any such easy solution.

Even against the most powerful defense, an aggressor in possession of the effective minimum number of atomic bombs for a surprise attack could probably place sufficient number of his bombs to cause hideous damage.

Should such an atomic attack be launched against the United States, our reaction would be swift and resolute. But for me to say that the defense capabilities of the United States are such that they could inflict terrible losses upon an aggressor--for me to say that the retaliation capabilities of the United States are so great that such an aggressor's land would be laid waste--all this, while fact, is not the true expression of the purpose and the hope of the United States. . . .

In reality, at least twice, the explicit threat of nuclear strike was made: once in korea where peace talks were bogged down and the threat resulted in a truce; and once to China which appeared to be staging an attack on Formosa which we had pledged to protect. The Strategic Air Command, our long-range bombing planes armed with nuclear bombs was alerted 30 times in the period between 1945 and 1975. But it must be added that in the period from 1945 to 1975 there have been over 200 armed conflicts in the world; yet none has resulted in nuclear exchanges.

1. What are the principles of Mutually Assured Destruction?

2. How does the policy fit with your moral statement on self defense? If they are inconsistent, would you wish to critize M.A.D. or revise your ethical position?

3. Some people say that M.A.D. has been successful. They point to 36 years without a nuclear exchange as their proof. Do you agree with this assessment? What are possible other reasons why modern war has been avoided?

The Cuban Missile Crisis[1]

Although Soviet and American soldiers did not fight each other directly on a battlefield, the Soviet Union and the United States fought the Cold War on several fronts. One of these fronts was the arms race, the race to build the most nuclear weapons. The United States and the Soviet Union each feared a surprise attack by the other. Both nations tried to prevent an attack by building nuclear weapons to retaliate (strike back). Each wanted to have the power to destroy the other so that the other would be afraid to start a war. By building nuclear weapons, threatening to use them, and threatening to retaliate if the weapons were used, the Soviet Union and the United States reached a risky stalemate called the balance of terror.

But could the balance be maintained? What would happen if one side challenged the other and the other side failed to back down? The moves in this deadly game were dangerous, as the next selection from Robert F. Kennedy's Thirteen Days shows.

In October 1962, the delicate balance of terror was being disturbed, and the United States and the Soviet Union almost went to war. American spy planes had discovered that the Soviet Union was placing missiles with nuclear warheads in Cuba, less than one hundred miles off the coast of Florida. Robert F. Kennedy, brother of President John F. Kennedy and a member of the President's cabinet, wrote the following account of how the Unites States and Soviet governments responded to the crisis that developed.

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[1] Reprinted from Thirteen Days, A Memoir of the Cuban Missile Crisis, by Robert F. Kennedy, W.W. Norton & Company, 1969

On Tuesday morning, October 16, 1962, shortly after 9 o'clock, President Kennedy called and asked me to come to the White House. He said only that we were facing great trouble. Shortly afterward, in his office, he told me that a U-2 (a military spy plane) had just finished a photographic mission and that the intelligence community (those in charge of gaining information, often secret information) had become convinced that the Soviet Union was placing missiles and atomic weapons in Cuba.

That was the beginning of the Cuban missile crisis--a confrontation between the two giant atomic nations, the US and the USSR, which brought the world to the abyss (edge) of nuclear destruction and the end of mankind. . . .

The general feeling in the beginning was that some form of action was required. There were those, although they were a small minority, who felt the missiles did not alter the balance of power and therefore necessitated (needed) no action. Most felt, at that stage, that an air strike against the missile sites could be the only course. Listening to the proposals, I passed a note to the President: "I now know how Tojo (premier of Japan) felt when he was planning Pearl Harbor."

It was during the afternoon and evening of that first day, Tuesday, that we began to discuss the idea of a quarantine or blockade. (That is, the United States would prevent all ships from reaching Cuba.) Secretary (of Defense) McNamara, by Wednesday, became the blockade's strongest advocate. He argued that it was limited pressure, which could be increased as the circumstances warranged (seemed necessary). Further, it was dramatic and forceful pressure, which would be understood yet, most importantly, still leave us in control of events.

Those who argued for the military strike instead of a blockade pointed out that a blockade would not in fact remove the missiles and would not even stop the work from going ahead on the missile sites themselves. The missiles were already in Cuba, and all we would be doing with a blockade would be "closing the door after the horse had left the barn." Their most forceful argument was that our installation of a blockade around Cuba invited the Soviets to do the same to Berlin. If we demanded the removal of missiles from Cuba as the price for lifting our blockade, they would demand the removal of missiles surrounding the Soviet Union. . . .

The members of the Joint Chiefs of Staff were unanimous in calling for immediate military action. They forcefully presented their view that the blockade would not be effective. General Curtis LeMay, Air Force Chief of Staff, argued strongly with the President that a military attack was essential. When the President questioned what the response of the Soviets might be General LeMay assured him there would be no reaction. President Kennedy was skeptical. "They, no more than we, can let these things go by without doing something. They can't, after all their statements, permit us to take out their missiles, kill a lot of Soviets, and then do nothing. If they don't take action in Cuba, they certainly will in Berlin."

I supported McNamara's position in favor of a blockade. . . . (Like) others, I could not accept the idea that the United States would rain bombs on Cuba, killing thousands and thousands of civilians in a surprise attack. . . .

At 2:30 (October 20), we walked up to the Oval Room. The meeting went on until ten minutes after five. Bob McNamara presented the arguments for the blockade, others presented the arguments for the military attack.

The President made his decision that afternoon in favor of the blockade. There was one final meeting the next morning, with Walter C. Sweeney, Jr., Commanding General of the Tactical Air Command, who told the President that even a major surprise air attack could not be certain of destroying all the missile sites and nuclear weapons in Cuba. That ended the small, lingering doubt that might still have remained in his mind. It had worried him that a blockade would not remove the missiles--now it was clear that an attack could not accomplish that task completely, either. . . .

Our group met (on October 23) with the President at 10 o'clock in the morning at the White House. There was a certain spirit of lightness--not gaiety certainly, but a feeling of relaxation, perhaps. We had taken the first step, it wasn't so bad, and we were still alive.

We came back about 6 o'clock that evening. During this meeting, we learned that an extraordinary number of coded messages had been sent to all the Soviet ships on their way to Cuba.

The President composed a letter to Khurshchev (head of the Soviet Union), asking him to observe the quarantine legally established by a vote of the OAS (Organization of American States), making it clear that the US did not wish to fire on any ships of the Soviet Union, and adding at the end: "I am concerned that we both show prudence (good sense) and do nothing to allow events to make the situation more difficult to control than it is." We then discussed in detail the rules that were to be given to the Navy intercepting a merchant vessel in the quarantine zone.

The next morning, Wednesday (October 24), the quarantine went into effect, and the reports during the early hours told of the Soviet ships coming steadily on toward Cuba. This Wednesday-morning meeting, along with that of the following Saturday, October 27, seemed the most trying, the most difficult, and the most filled with tension. The U-2s and low-flying planes had returned the previous day with their film, and through the evening it was analyzed. Comparisons with the pictures of a few days earlier made clear that . . . within a few days several of the launching pads would be ready for war.

A few minutes after 10 o'clock Secretary McNamara announced that two Soviet ships, the Gagarin and the Komiles, were within a few miles of our quarantine barrier. Then it was 10:25--a messenger brought in a note to John McCone (Director of the Central Intelligence Agency). "Mr. President, we have a preliminary report which seems to indicate that some of the Soviet ships have stopped dead in the water."

Despite what had happened the danger was anything but over. We learned later in the day that fourteen of the twenty-two ships had stopped or had turned back to the Soviet Union. Most of those continuing were tankers. . . .

There were almost daily communications with Khrushchev. All our efforts and letters, however, seemed to be having little effect. On the contrary, as we waited for the reply to President Kennedy's latest communication with Khrushchev, reports came in that a greater number of Russian personnel were working to expedite (speed up) the construction of the missile sites and to assemble the (missles) . . . . The President in response ordered a gradual increase in pressure, still attempting to avoid the alternative of direct military action. He increased the number of low-level flights over Cuba from twice a day to once every two hours. In the meantime, we awaited Khurshchev's answer.

At 6 o'clock that night (October 26) the message came. There was no question that the letter had been written by him personally . . . . We must not succumb (give in) to "petty passions" or to "transient (passing) things," he wrote, but should realize that "if indeed war should break out, then it would not be in our power to stop it, for such is the logic of war. I have participated in two wars and know that war ends when it has rolled through cities and villages, everywhere sowing death and destruction." The United States, he went on to say, should not be concerned about the missiles in Cuba: they would never be used to attack the United States and were there for defensive purposes only. "You can be calm in this regard, that we are of sound mind and understand perfectly well that if we attack you, you will respond the same way. But you too will receive the same that you hurl against us. And I think that you also understand this. . . . This indicates that we are normal people, that we correctly understand and correctly evaluate the situation. Consequently, how can we permit the incorrect actions which you ascribe (assign) to us? Only lunatics or suicides, who themselves want to perish and to destroy the whole world before they die, could do this."

But he went on: "We want something quite different . . . not to destroy your country . . . but despite our ideological differences, to compete peacefully, not by military means."

There was no purpose, he said, for us to interfere with any of his ships now bound for Cuba, for they contained no weapons. He then explained why they carried no missiles: all the shipments of weapons were already within Cuba. This was the first time he had acknowledged the presence of missiles in Cuba. . . .

The reason he had sent these weapons to Cuba was because the US was interested in overthrowing the Cuban government, as the US had actively attempted to overthrow the Communist government in the Soviet Union after their revolution (in 1918). But then he went on: "If assurances were given that the President of the United States would not participate in an attack on Cuba and the blockade lifted, then the question of the removal or the destruction of the missile sites in Cuba would then be an entirely different question. Armaments bring only disasters. When one accumulates (collects) them, this damages the economy, and if one puts them to use, then they destroy people on both sides. . . . If people do not show wisdom, then in the final analysis they will come to a clash, like blind moles, and then reciprocal extermination (complete destruction) will begin."

I had a slight feeling of optimism as I drove home from the State Department that night. The letter . . . had the beginnings perhaps of some accommodation, some agreement. The feeling was strengthened by the fact that John Scali, a very able and experienced reporter for ABC, had been approached by an important official of the Soviet Embassy with a proposal that the Soviet Union would remove the missiles under United Nations supervision and inspection, and the US would lift the blockade and give a pledge not to invade Cuba as its part of the understanding.

On Saturday morning, October 27, I received a memorandum (note) from J. Edgar Hoover of the FBI that gave me a feeling of considerable disquiet (uneasiness). He had received information the night before that instructions from Moscow had been received by certain Soviet personnel in New York, ordering them to prepare to destroy all sensitive documents on the basis that the US would probably be taking military action against Cuba or Soviet ships, and this would mean war. I asked myself as I drove to the White House: If the Soviets were anxious to find an answer to the crisis, why were they giving these instructions to Soviet personnel? Did the Khrushchev letter really indicate a solution could be found?

It was therefore with some sense of foreboding (worry) that I went to the meeting of our Ex-Comm committee (Executive Committee of the National Security Council). My concern was justified. A new, this time very formal, letter had arrived from Khrushchev personally who was writing, but the Foreign Office of the Kremlin. The letter was quite different from the letter received twelve hours before. "We will remove our missiles from Cuba, you will remove yours from Turkey. . . . The Soviet Union will pledge not to invade or interfere with the internal affairs of Turkey; the US to make the same pledge regarding Cuba.

The Joint Chiefs of Staff joined the meeting and recommended their solution. It had the attraction of being a very simple next step--an air strike on Monday, followed shortly afterward by an invasion. They were not at all surprised that nothing had been achieved by limited force, for this is exactly what they had predicted.

The State Department submitted a draft of a letter for response from President Kennedy to Khrushchev. It answered the arguments made in Khrushchev's latest letter, maintaining that we could not remove the missiles from Turkey and that no trade could be made.

I disagreed with the content and tenor (tone) of the letter. I suggested, and was supported by Ted Sorensen (a presidential adviser) and others, that we ignore the latest Khrushchev letter and respond to his earlier letter's proposal, as refined in the offer made to John Scali. There were arguments back and forth. Everyone was tense: some were already near exhaustion: all were weighted down with concern and worry. President Kennedy was by far the calmest. Finally, when we almost seemed unable to communicate with one another, he suggested with a note of some exasperation (annoyance) that--inasmuch as I felt so strongly that the State Department's various efforts to respond were not satisfactory--Ted Sorensen and I should leave the meeting and go into his office and compose an alternative response, so he could then decide between the two. Forty-five minutes later, we took it to him and to the whole group. He worked on it, refined it, had it typed, and signed it. It accepted Khrushchev's "offer."

I had promised my daughters for a long time that I would take them to the horse show, and early Sunday morning I went to the Washington Armory to watch the horses jump. In any case, there was nothing I could do but wait. Around 10 o'clock, I received a call at the horse show. It was Secretary (of State) Rusk. He said he had just received word from the Soviets that they had agreed to withdraw the missiles from Cuba.

Connections:

The Cold War: Sphere of Influence, Containment, or Massive Retaliation.

The Cuban Missile Crisis: Once the United States was on the verge of war within the policy of M.A.D., when the Soviet Union appeared to call our bluff. Three excellent sources for students on the Cuban Missile Crisis are "Promise of American" An Unfinished Story, pp. 108-117 (short, fairly simple); AEP, Confrontation: Cuban Missile Crisis (detailed excellent) and Shadows of a Nuclear Age, Program V, "The Missile Crises" (tape and transcripts available from SANE,

Study questions may include:

a. Outline the events of the crisis in chronological order.

b. In this political decision, who had the authority in the USA? Why were other governmental bodies less important? What were the qualities of this American leader (see Cuban Missile Crisis, pp. 19-23, on both men's personalities)?

c. The second week of the Cuban missile crisis has been compared to a roller coaster: a series of emotional ups and downs, of hopes and frustrations felt by the President and his advisers as they struggled to make the right decisions.

How can other Americans understand how these decision makers felt inside? Think of the last time you fought with your brother or sister, or argued angrily with your parents or a friend. Have you ever played in a game where you became so frustrated that you wanted to hit an opponent? Were you able to resist the urge? How much pressure or frustration will make you blow your stack? Is the blowing point always the same? How well do you work under pressure? Do you get angry and upset or do you stay cool?

How would a person of your temperament have been able to function as a member of the Executive Committee during the Cuban missile cirsis? Compare the emotions you have personally experienced to those you think were experienced by the decision makers in the missile crisis.

d. Why were President Kennedy and his top advisers able to agree almost immediately on the need for the United States to get the offensive Soviet missiles out of Cuba? Did they share values that might have led them rapidly to the same conclusion? If so, what were these values?

traditional American leadership in the Western Hemisphere

national security

fear or hatred of communism

national pride or prestige

reputation of the Kennedy Administration

other

Rank by number the above values according to the importance you think each had in influencing the decision to get the offensive missiles removed from Cuba?

How would these values affect public opinion?

e. Information is crucial in any decision. When President Kennedy was shown pictures of the missile sites in Cuba, he couldn't tell from an aerial photograph exactly what he was looking at. He and his advisers had to take someone else's word.

Each person makes decisions based on advice from others. Take smoking, for example. You have advice on smoking from friends, medical experts, parents, and media figures. How much of your decision on smoking is based on experts' advice? How much is based on your own values?

f. Do you think Kennedy was justified in risking nuclear war in this instance?

g. What do you think would have happened in the Cuban missile crisis if:

1. Kennedy had chosen the air strike instead of the blockade?
2. both US conventional and nuclear forces had not been strengthened over the previous 21 months?
3. it were not for the combined skill and courage that produced the U-2 photographs?
4. a blockade had been instituted before the US could prove Soviet deception and the existence of offensive weapons in Cuba?
5. Kennedy and Krushchev had not been accustomed to communicating directly with each other and had not left that channel open?
6. the President's speech on Monday, October 22, had not taken Krushchev by surprise?

CHAPTER VII:

NEGOTIATING

Activity 1: Attempts to Reduce Armaments

1. Disarmament Treaties -- can take many forms.
   - a. partial disarmament -- dismantling certain weapons.
   - b. unilateral disarmament -- one power disarms regardless of what the opposition does.
   - c. bilateral disarmament -- the two major powers disarm (fully or partially) together.
   - d. multi-lateral disarmament -- all or many of the nuclear powers agree to some form of disarmament.

Connections:

The following pieces on military strategies, strategic and tactical weapons and delivery systems, and NATO defense strategy have been included as background for students and teachers.

Activity 2: Current Thinking About Military Strategy

Strategy in a military context is defined as "The science or art of military command as applied to the overall planning and conduct of large scale combat operations" (The American Heritage Dictionary of the English Language, 1969). It is in contrast to tactics which have to do with the maneuvers of relatively small combat units on the battlefield in contact with the enemy.

Since theoretically war is the result of national policies, the strategy for conducting the war should grow out of these policies and national goals. Military force is normally only used when all other methods of international coercion have failed. In this sense, it is said to be merely an extension of foreign policy. In a democracy such as ours, the military leaders do not determine national goals, even in time of war. This is done by the civilian heads of government who then, if war results, determine the goals to be reached by military action and the overall plan of operations. The military leaders in turn determine the strategy they will use to bring the conflict to a satisfactory conclusion.

At the outbreak of World War II it was determined by the heads of the American government that the main thrust of our military power would be directed towards defeating the Axis forces in Europe and then the Pacific theatre would receive the full weight of our armed might. Then the U.S. War Department made the necessary strategic plans for implementing this policy. During the American Civil War the South, in order to gain its independence, had only to remain on the defense and avoid defeat until the resolve of the North had been worn down. It would assume a strategic defense. It had neither the person-power and economic resources, nor the necessary allies to enable it to launch a full-scale invasion of the North and defeat the Union armies. Its two attempts to attack north of the Potomac River ended in costly failures, Antietam and Gettysburg. On the other hand, the North, if it wanted to achieve Lincoln's goal of preserving the Union, had to invade the South, defeat the Confederate armies, and enfore the laws of the United States. It had to assume a strategic offense. These two differing sets of conditions and aims established the basic military strategy for the opposing armies.

The end of World War II found the United States the predominant economic and military power in the world and consequently devised a global military plan. It had already established a network of naval and air facilities in the Atlantic and Pacific Oceans in order to preserve the freedom to move its naval forces from one ocean to the other via the Panama Canal and to protect its interests, economic and political, in the Western Hemisphere and the Far East. By the end of World War I in 1918, we had bases in Cuba, Puerto Rico, the Virgin Islands, the Panama Canal Zone, Hawaii, the Philippine Islands, the Marianas, and Samoa. But these bases did little to contain what came to be perceived as a growing threat from Soviet military power and political influence around the world. To help counter this threat in Europe, the United States, through the Marshall Plan, helped its formed allies and enemies in Western Europe to regain their economic and political stability. This economic cooperation then led to military cooperation through the formation of the North Atlantic Treaty Organization (NATO) as the West Europeans looked with apprehension at the Soviet consolidation of its political and military power over the countries of Eastern Europe. The Soviet Union and its satellites then countered NATO with the formation of the Warsaw Pact.

These developments, which were partially an outgrowth of America's new position in the world, have in turn molded our military planning. At its core is the containment of Soviet military power, political influence, and territorial expansion. Though primarily based on the European experience, it has spilled over into other parts of the world. U.S. efforts in Korea in the 1950's (under the auspices of the United Nations) and in Viet Nam in the 1960's (with some help from other Southeast Asian countries) were the results of the original policy of containment of the perceived Soviet and Chinese communist threats. Our military forces and their necessary logistic support in the form of bases have been developed primarily to enable the United States to confront the Soviet Union and their satellites with enough force to prohibit the growth of its territory and political influence.

How serious the Soviet threat is in reality is a question for debate, and how an individual decides this question will determine to a large degree what s/he thinks our military posture should be.

The so-called "hard liners" believe that the Soviet Union is making a determined and calculated effort to build an overpowering military force, both conventional and nuclear, which will enable them to dictate terms to the West. This theory regarding Soviet intentions is stated as follows on a manual prepared under the auspices of the U.S. Air Force:

> "Perhaps the single most important aspect regarding the Soviet nuclear threat in Europe is the political objectives that underlie their military strategy, namely, to consolidate and maintain their hold on Eastern Europe under Soviet hegemony" [rule].[1]

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[1] The Soviet Theatre Nuclear Offensive, Studies in Communist Affairs, Vol. I, Joseph D. Douglas, Jr., 1976. Prepared for: Office of Director of Defense Research and Engineering (NET Technical Assessment) and Defense Nuclear Agency, page 4.

This line of reasoning has been advocated by a group called The Committee for the Present Danger, which claims as members such people as President Reagan, Paul Nitze (a U.S. arms negotiator), Professor Pipes of Harvard University, Professor Scott Thompson of the Fletcher School of Law and Diplomacy, and many other prominent people both in and out of government. Many of Mr. Reagan's advisors come from this group.

There are, however, other people, mostly now out of government, who feel that the Soviet threat has been greatly exaggerated. George Kennan, a former Ambassador to the Soviet Union, and the architect of the policy of containment in the early 50's, is one of the most respected people in this group. Since World War II, when he enunciated his policy of containment of Soviet influence in Western Europe, he was not thinking primarily in terms of military confrontation, though that contingency could not be ruled out.

Mr. Kennan was thinking largely in terms of economic and political measures to hold the Soviet Union at bay. He and like-minded people view the Soviets as a threat to world political stability, but do not see them as bent on world military domination. The United States and its NATO allies should not neglect their military forces, particularly the conventional component, but they believe the present administration's sabre-rattling is counter-productive. Those in Mr. Kennan's camp are apt to believe that it is the constant reference to military force and the repeated comparisons of our strength vs. the enemy's that helps to fuel the ever more expensive arms build-up. They also point to the past history of alarmist rhetoric concerning the Soviet military superiority. In the 1960's, Mr. Kennedy was persuaded that the Soviets had a commanding lead over the United States in ICBM's, and this was one of the issues on which he campaigned. After the United States built up the Titan II arsenal it was discovered that the Soviets did not have a lead and our build-up may have influenced their subsequent expansion. Much the same sort of sequence of events occurred in the 1950's when President Eisenhower felt that the Soviets had a commanding lead in long-range bombers and ordered that we build a matching force. As it turned out, the Soviets did not have and never had a long-range bomber force that matched ours.

How much is enough? When this question is applied to nuclear weapons there are a variety of answers. At one end of the spectrum are people who take the stand that a nation should not have any of these weapons, even if other nations possess them. They believe we should unilaterally dismantle our nuclear arsenal. A portion of these people believe this way about all types of arms, while others who take this stand believe this way only about nuclear arms. At the other extreme are those who believe we should be able to dominate all other nations, that our stockpile of nuclear warheads and delivery systems and civil defense measures should be such that the United States could fight and win a protracted nuclear war. They also believe that we should develop strategies for the use of our ICBM's and tactical nuclear weapons which will integrate these weapons into every facet of our war-making ability. In between these extremes are various other positions. The Reagan Administration's stand as expressed by Secretary of Defense Weinberger seems to say that we will not be surpassed by the Soviets that we view our nuclear weapons as primarily a deterrent force, but that if a nuclear war happens, we will be able to survive a first strike and win in the end.

Another large group, which includes George Kennan, believe that nuclear weapons are useless other than as a deterrent. They hold that to speak of "winning" a nuclear war is sheer nonsense, and that it would be almost impossible to use even tactical nuclear weapons without a full-scale holocaust ensuing. Most of these people feel that our conventional forces in Europe, and in other parts of the world if necessary, should be strong enough to make an attack so costly to the Soviets that it will not be attempted. Our nuclear forces, likewise, should be just large enough to make any adversary refrain from attacking us knowing that a devastating retaliatory strike would follow. Most of the debate, in and out of government, revolves around these last two positions.

Activity 3: Strategic Nuclear Weapons and Delivery Systems

The first two and only nuclear weapons dropped on an enemy target were delivered to their targets in Japan by United States B-29 bombers. They were four engine propeller-driven aircraft which took off and returned to Saipan, an island in the Western Pacific which had been recaptured from the Japanese. The bombs were free falling, that is, with no guidance after they left the planes' bomb bays. The weapons by today's standards were small -- the Hiroshima one was rated as a 12.5 kiloton (KT) device -- though it was nicknamed "Little Boy". A 12.5 KT bomb has the explosive power of 12,500 tons of dynamite (TNT). The largest conventional bomb used in World War II had a force of 10 tons of TNT.

Today, nuclear warheads can be delivered by a variety of means. The popular image of a missile is the intercontinental ballistic missile (ICBM), sometimes referred to as a strategic missile. As used in this term, ballistic means that the missile is internally guided during its take-off and early flight, but then free-falls when it heads down towards its target. These are large rockets similar to but smaller than those used to launch space vehicles. ICBM's carry a nuclear warhead rather than a space satellite. The size, speed and accuracy of these weapons have been continually improved by both nations. These advances include the ability for the large rocket, sometimes called the "bus", to carry several smaller rockets, each with its own warhead and each one now capable of being directed to its own target. These are termed multiple independently targeted re-entry vehicles (MIRV's).

The Soviet Union's latest model, the SS-18, is some 32 meters long, carries eight to ten MIRV's, travels about 20,000 KMPH, and can hit within 300 meters of the target. Each of the MIRV's has an explosive power of 500 KT. America's most sophisticated ICBM at the moment is the Minuteman III, called a light missile, which is about 20 meters long, travels at about 20,000 KMPH, and can hit a target with an error of about 200 meters. It carries three or four MIRV's of 170 KT each. The U.S. is in the process of developing the MX missile, which is an even more advanced ICBM than the Russian SS-18. The MX will carry ten MIRV's, and the accuracy has been improved to a miss distance of 100 meters or less. In general, our rockets have been smaller than the Russian's because we have had better accuracy, though this advantage is being eroded. In addition to the land-based ICBM's, both the Soviets and the Americans can deliver strategic nuclear warheads from submarines and by high speed long-range bombers.

The second leg of the United States' Triad of forces, submarine launched ballistic missiles (SLBM's), are currently the most secure nuclear force the United States has. They have undergone continuous improvement with a new generation of boats and missiles, the Trident II, joining the fleet now. The submarines are nuclear powered, very fast (probably in excess of 40 mph), stay submerged for up to 60 days while on routine patrol, and can fire their missiles while submerged. One of the new Tridents carries 16 SLBM's and each of these rockets carries 10-14 10KT MIRV's. Theoretically, each of these submarines can destroy up to 224 targets at a range of 7000 km (5000 miles). Target accuracy now matches that of the land based ICBM's, which makes them a threat to the Soviet's primary retaliatory force, the SS-18's.

The United States' third leg is the long-range bomber, currently the eight jet B-52 which was first deployed in 1959 and now considered by some to be near obsolesence. It has an unrefueled combat radius of 4400 km (2750 miles), carries a bomb load of 60-70,000 lbs., and travels at about 0.95 MACH -- that is, 0.95 times the speed of sound. At present its bombs are free-falling so it must fly directly to its target evading the Soviet air defenses. The U.S. Air Force has for some time wanted to acquire a new generation of bombers to replace these old B-52's. It now has the go-ahead to buy a fleet of B-1's which will be joining the bomber command shortly. The B-1 is faster than the B-52, carries a bigger bomb load, and is better able to penetrate the Soviet air defenses. Both of these planes can be refueled in flight, which extends their range considerably. In the development stage is yet another generation of bombers, called the "Stealth" bomber. It will have a built-in radar avoidance system that will make it even more difficult for the Soviet defenses to detect it as it approaches their air spaces.

The Soviets, of course, have their own submarines and bombers. However, they have placed primary reliance on their land-based ICBM's, and, at the moment, are behind the U.S. in numbers and sophistication in these weapons systems.

The latest nuclear warhead delivery method is the "cruise missile". Originally developed by the United States, it is now being produced and will soon be deployed with NATO forces in Europe. It is really a miniature, pilotless, self-guiding airplane about 20 feet long and capable of carrying either conventional bombs or rockets or a 200 KT nuclear device. It has a range of about 3200 km (2000 miles). The cruise missile can be launched from the ground, from the deck of a ship, or from an airplane. If carried by a B-52 or B-1 bomber, it permits the pilot to launch missiles before reaching the Soviet air defenses and thus lessens the chance of being shot down. The missile is slow, but has its own built-in guidance system, flies close to the ground, and is difficult to bring down.

Activity 4: Tactical Weapons -- Nuclear Devices and Delivery Systems

It is often difficult to distinguish between tactical and strategic weapons. However, for the sake of simplicity, we have labeled as strategic those weapons that have an intercontinental range and that are used against targets than enable a country to wage war -- industrial complexes, missile sites, population centers, etc. Tactical weapons are those emplaced on or near the battlefield and that are to be used against such targets as: troop concentrations, tank and truck parks, tactical nuclear weapons sites, key transportation bottlenecks such as bridges and railroad junctions, division and regimental headquarters complexes, and marshaling areas being the battlefield. These weapons are smaller in explosive yield and do not cause the damage of ICBM's, yet they are tremendous in comparison to conventional explosives. They range from 2 KT to 400 KT. To put these figures in some sort of perspective, remember that the Hiroshima bomb was a 12.5 KT device that destroyed a large city and killed 100,000 people. Nevertheless, they are "smaller" than the Soviet's early strategic ICBM, the SS-18 model which carried a 10-20 megaton (MT) warhead. A MT is one million tons of TNT.

These tactical nuclear weapons can be divided into two general categories: intermediate-range nuclear forces (INF) and short-range nuclear forces (SNF). Delivery systems consist of ground-launched missiles, tube artillery (cannons), and aircraft.

The ground-launched missiles are essentially scaled-down versions of the ICBM's discussed earlier. Being smaller and lighter they are easily moved from one site to another and can be launched rather quickly, and are very accurate. The most advanced of this type is the Soviet SS-20. It is launched from a self-propelled vehicle, carries three MIRV's, and has a range of about 5000 km. Their explosive power varies from 60 to 400 KT. The United States, at the urging of its NATO partners, is ready to deploy its own Pershing missile system. It has a shorter range than the SS-20 (1000 km) and carries only one warhead. However, even though its range is limited, it can still reach well into the Soviet Union from launch sites in West Germany, and the warning time would be five or six minutes. There are other systems on both sides, but these are being phased out as the newer ones come on line.

Combat tactical aircraft also deliver these smaller warheads. The United States F4, a multi-use fighter, can drop up to eight tons weight of varied nuclear bombs. Other planes can carry similar loads and have ranges up to 2400 km.

The smallest of these tactical weapons are those fired by conventional artillery pieces, called "tube-fired weapons". The United States has a 155 mm self-propelled howitzer, the M109, which fires a 2KT warhead up to about 16km, and the M110, which is an eight-inch self-propelled howitzer firing a 2KT warhead up to 28km (155m and 8" refer to the diameter of the bore of the cannon, and "howitzer" means that the shell or warhead rises high in the air and can thus hit targets behind hills or other obstructions). These types of weapons have been standard equipment in the U.S. and Soviet armies for decades, but it has only been since after World II that they could fire nuclear warheads.

Activity 5: NATO Defense Strategy

Since the inception of NATO the over-riding concern of its members has been the specter of a sudden massive attack by the Warsaw Pact nations. Traditionally, a military rule of thumb has been that an attacking force should have a superiority in soldiers and equipment of at least three to one. Defenders can fight from prepared positions, do not have to expose themselves as much as the attacker, and know intimately the terrain on which they are fighting. Therefore, NATO has not attempted to match the Pact nations numerically. Also, NATO in the past has depended upon other advantages it possesses: a superior technology in weaponry, better educated personnel, and the dominating power of United States nuclear forces. West Europe felt it could get by on the cheap and not devote as large a percentage of national wealth to defense as the Soviet Union or the United States.

However, in the past decade the Soviet Union has narrowed the gap in technology, and has reached at least parity with the United States in nuclear armaments. The prior reliance on United States superiority is now suspect and as the Soviet Union deploys more and more intermediate range missiles and increases the numerical lead in personnel and equipment, NATO is faced with a dilemma. To rely on the threat of the use of nuclear weapons if the Pact nations threaten to over-run West European defenses increases the likelihood of Europe becoming a nuclear battlefield and raises the question: Would the United States risk the possibility of having its cities destroyed in order to defend its allies in Europe? As more and more tactical nuclear weapons are installed, the West Europeans become more and more alarmed.

As with all of these issues, there are differing opinions on how to deal with them. There are some who say that the deterrence provided by the threat of nuclear war is still the best answer. It has worked for over 30 years, is in place, and is the least expensive. They also feel that a conventional war would cause nearly as much damage as a limited nuclear war. A different opinion is that dependance on nuclear weaponry is not morally justifiable, that the threat of a **Pact** attack is not so serious as to require such a stance, and that a conventional defensive force is affordable, if properly planned. Included in this argument is the underlying assumption that any use of nuclear weapons will inevitably lead to a nuclear holocaust. Can you think of other perspectives?

Activity 6: The First Strategic Arms Limitation Talks

Introduction

Before the mid 1960s, the US enjoyed a clear lead over the USSR in nuclear warheads, strategic bombers, and intercontinental missiles. Various bomber and missile gaps failed to materialize. At that time defense planners adopted a new strategy. They began to plan America's defenses on the assumption that the US only needed enough weapons to scare the Soviets out of attacking us. Thus, the Soviets could be allowed to catch up with the US, or even get ahead. All that we would need would be enough weapons to inflict unacceptable destruction on the Soviet Union in case of an attack. This strategy was called MAD, because it depended on the assumption of mutual assured destruction.

Following the new strategy, the US allowed the Soviet Union to rapidly decrease our lead in nuclear weapons. After they obtained what most experts would call 'rough parity', it became easier to negotiate arms control treaties with them. The first of these was the famous SALT I Treaty. Besides setting limits on certain classifications of weapons, this treaty set the stage for a more comprehensive arms limitation pact, SALT II. Both of these agreements were opposed by Americans and Soviets who felt that their country should not negotiate an agreement allowing the other to become or remain superior.

The 'Missile Gap'

As we have seen, the Soviets' success in orbiting the world's first man-made satellite caused Americans to fear that their lead in space technology created a serious threat to America's security. Westerners quickly corrected an earlier tendency to downgrade the quality of Soviet science. Alarmist views now replaced complacency. Various experts estimated that the Soviets could have 200 intercontinental ballistic missiles with nuclear warheads, ready to strike American cities by 1960 or 1961. The famed 'bomber gap' of several years before was replaced by a predicted 'missile gap'.

Fear of Soviet intentions was further stimulated by the absence of reliable information. Forced by disclosure of US flights over USSR soil, America had to discontinue its routine U-2 photo reconnaisance flights over Russian in 1959. By the time US spy satellites supplied the data once obtained from the U-2's, a presidential compaign based in part on the preparedness issue resulted in the election of John F. Kennedy.

Despite intense pressures to speed up America's emplacements of its liquid fluid Titan ICBM's, President Eisenhower did not. The former general even gave a farewell address in 1960, warning against the pressures to arm America from the 'military-industrial complex'. But John Kennedy had made a major campaign issue out of the predicted missile gap. In a whisker-close election, Kennedy beat Eisenhower's experienced vice-President, Richard Nixon. Although aeriel photographs beginning in January, 1961, confirmed the Republican party's position on the missile gap, the new President sped up the procurement and installation of America's missiles. Liquid fuel Titans were lowered into silos, later hardened, and obsolete weapons were removed when solid fuel and more accurate Minutemen were ready to replace the previous years' model. Meanwhile, the missile gap which some had estimated at potentially as high as 3:1 in the Soviet's favor, turned into a 5:1 American advantage. The US made steady progress to obtain its goal of some 1050 ICBM's, a number which it has maintained through the 1970s.

Looking at America's 5 to 1 lead in intercontinental ballistic missiles from the Soviet's side, would put the USSR behind by 1-5. Furthermore, the US had placed missiles in bases in Turkey and western Europe. These disadvantages rankled the Soviets. Perhaps they also explain Soviet Premier Nikita Khrushchev's decision to install Soviet missiles close to the United States. The rise of his communist ally in Cuba, Fidel Castro, only ninety miles from Florida, gave Khrushchev an opportunity to place Soviet missiles close to the United States. Beginning late in the summer of 1962, Khrushchev secretly sent Soviet intermediate range ballistic missiles to Cuba. Before these weapons were fully installed, US air reconnaisance planes spotted the tell-tale evidence of Khrushchev's gamble. After telling the American people of the danger early in October, President Kennedy ordered a naval blockade of Cuba. Heavily outnumbered in both ships and missiles, Khrushchev decided to crate up his missiles and send them home. This famous missile crisis marked the last time the Soviet Union allowed itself to be heavily outnumbered and overwhelmed in a direct confrontation with the United States.

Rough Party and the Strategic Arms Limitation Talks

Following the Cuban missile crisis, the Soviets embarked on a crash program for achieving at least strategic equality with the United States. Part of their efforts were defensive. They ringed Moscow with a complex of anti-ballistic missiles (ABM's), and corresponding radar installations. Fallout shelters stocked with food and medicine were constructed The Soviets also began to install intercontinental ballistic missiles at a rapid rate. The number of these menacing weapons increased from 350 in 1965 to 850 in 1968. Photographic evidence revealed 1,000 potential launching sites but the Soviets gave no indication they would stop there. Another cause for American alarm was the size of the new Soviet missiles. The SS-18 could fire a warhead with the equivalent of 25 megatons over 6,000 miles. This was five times greater than the explosive power of America's largest ICBM's. These warheads were larger than needed to destroy even the most populated American city. Experts began to speculate that the Soviets intended these 'modern heavies' to wipe out whole fields of American missiles spread out in North and South Dakota, Montana, Missouri, and Wyoming in their hardened silos. In other words, Americans feared that the Soviets were trying to obtain first strike capacity--by first knocking out US missiles, and then defending their cities with ABM's. Although the Soviets were still behind in total launchers and warheads, some people in America feared they would soon surpass the US.

Two of America's responses to the Soviet's newest challenge are worth noting. First, the US began devising a new missile to penetrate Soviet ABM defenses. The US armed its ICBM's with multiple warheads, each targeted to hit different sites. While the Soviet's anti-ballistic missile defenses might be able to destroy one or two warheads, they would most likely not be able to knock all of them out. This was the origin of the MIRV (multiple independently retargetable reentry vehicles) that have played such a major role in recent escalations of the arms race.

The second US response to the twin challenge of Soviet ABM's and new missiles was to begin arms reduction talks. These talks were prompted in part by the belief by American policy makers that the US could not indefinitely maintain clear superiority over Soviet strategic forces. Negotiations were seen as a way of protecting America's security while curbing the ever upwardly spiraling, costly arms race.

Talks with the Soviet Union began in 1969, under President Richard Nixon and his Secretary of State, Henry Kissinger. It took three years before these strategic arms reduction talks (hence SALT) resulted in an agreement. In May, 1972, President Nixon flew to Moscow where he and Premier Leonid Brezhnev initiated the SALT I Treaty. The main provisions follow:

1. The US and the USSR would limit ABM installations to protect their capital city and one field of ICBM's. (In 1974, the two countries agreed to install only one cluster of ABM's.)

2. The US and the USSR agreed to construct no more missile silos or missile carrying submarines for five years.

3. The US and the USSR agreed to negotiate a more comprehensive weapons limitation agreement, guided by the principles of 'rough parity' for both sides, prohibiting deliberate concealment of weapons, and permitting verification through "national technical means" (meaning spy satellites, electronic eavesdropping, etc.)

The Significance of SALT I and the Road Ahead

The SALT I Treaty was an important first in Soviet-American relations. Not only was it the first arms limitations agreement between the US and the USSR, but it incorporated several very important principles. For instance, the Soviets recognized the need for verification; both sides allowed it would permit the other to maintain 'rough parity' in forces; and, both agreed to continue their serious dialoguing. Furthermore, the momentum achieved in these talks might well carry on into future negotiations that could lead to a more permanent and comprehensive agreement.

Despite the general satisfaction with it, the SALT I Treaty faced determined opposition in the US Senate, where a vote of one more than one-third could defeat it. The Treaty's opponents focused on the provisions freezing construction of missile silos and submarines. This freeze they pointed out correctly, allowed the Soviets to maintain their lead of 2,400 to 1,700 missiles, including their 'modern heavies' which were much more potent than any American counterpart.

The Treaty's supporters argued that, unlike Soviet's, many of America's ICBM's were MIRVed, and the US maintained a far larger fleet of intercontinental bombers. Thus the Soviet's lead in missiles was meaningless because it did not give them a corresponding lead in deliverable nuclear warheads. They also pointed out that US missiles were far more accurate than the Soviet's. Finally they argued that the US with far more missiles on submarines was less vulnerable to a crippling first strike than the Soviet Union.

Activity 7: Student Exercises:

1. Identify or define and briefly explain the relevance to the chapter of each of the following:

   a. MAD, b. 'missile gap', c. 'military-industrial complex', d. missile crisis, e. 'rough parity', f. ABM, g. 25 megaton, h. three areas of agreement in SALT I, i. missile freeze, j. MIRVing, k. missile accuracy.

2. Explain the two main issues of the arms race, and the reasons why each is important.

Activity 8: Negotiating SALT II

Introduction:

A difficult decision faced President Jimmy Carter during his first 100 days in office. He had to decide whether to resume negotiations on SALT II by merely attempting to complete an agreement in principle reached under his predecessors, President Nixon and Ford; an agreement which he thought did not go far enough. This agreement would allow the Soviets to keep their 300, SS-18's armed with 25 megaton warheads, and their new supersonic, Backfire bombers. Furthermore, the Soviets would not be required to reduce their missile launchers, though the US was allowed to add 700 to their inventory, and thus matching the Soviet's 2,4-0, Carter thought this was neither arms reduction nor a favorable treaty. Wouldn't it be possible, he thought, to do better than that?

In the USSR, Premier Leonid Brezhnev was satisfied with the concessions he had won from the US, but felt he had been generous in allowing them equality in missiles, for theirs were more accurate and equipped with multiple warheads. Furthermore he had allowed America to keep its destabilizing cruise missiles, and accepted limitations on his own Backfire bombers.

Imagine, completing agreement on these issues so vital to the defense of both countries. What would you do, if you were President Carter, his chief arms negotiator, Paul Warnke, or his chief critic Senator Henry Jackson? What would you do if you were a hard-line Soviet general at these talks, or, for that matter, Premier Brezhnev? or, a representative from a neutral nation?

This chapter provides you and your classmates these and other roles as you negotiate the controversial SALT II Treaty.

SALT II Under Nixon, Ford, and Kissinger

One of the unfullfilled goals of SALT I, was the elimination of the Soviet 'modern heavies' their SS-18 missiles with their 25 megaton warheads. Some American experts believed this new missile could give the Soviets a much feared first strike capacity. One of the persistent criticisms of the Treaty is it allowed the Soviets to keep all 300 of them, while a freeze on new missiles stopped the US from building an American counterpart. It may also be recalled that one of the arguments for ratifying SALT I, was that American missiles were more accurate and carried more warheads than the Soviets'. But the Soviets began to use their privilege under SALT I to deploy new missiles in place of older, or obsolete weapons. Their newcomer, the SS-19, turned out to be a lighter and more accurate version of the SS-18, equipped with six independently retargetable warheads. American negotiators at SALT II would have dearly loved to prevent Soviet from replacing their SS-18's with SS-19's.

The agreement reached by US and Soviet negotiators under the Nixon-Ford administration may be understood in terms of the various trade-offs or concessions each side granted the other, under a general ceiling on which both agreed. First, a limit of 2,400 missile launchers were granted each side, allowing for an increase of 700 for the US. Secondly, of these 2,400, a sub-ceiling of 1,320 missiles could be armed with multiple warheads. In other words, each side could MIRV 1,320 missile launchers, and could not MIRV the reamining 1,080.

The real horse trading began when both sides had to agree which weapons each could count under the two ceilings. One bargain involved the controversial SS-18's and 19's. The Soviets were absolutely commited to these missiles and refused either to reduce the number or stop upgrading them. However, American chief negotiator was able to extract one concession from the Soviets. They agreed not to count America's intermediate range ballistic missiles, capable of striking the Soviet Union from their bases in Western Europe as part of either ceiling. This was a major concession because the Soviets had no comparable IRBM's capable of hitting US cities.

Another major trade-off in SALT II involved the Soviet's new Backfire bomber, and the US cruise missiles, mounted on B-52's. The Soviets considered the cruise a dangerous weapon because its ability to fly low around the earth's contours made it difficult to spot by radar and impossible to defend against. Despite these qualities, the Soviets allowed the US an unlimited number of cruise missiles stationed in Europe. However, they did succeed in counting US B-52 intercontinental bombers outfitted with cruise missiles under America's sub-ceiling of 1,320 MIRVed launchers. In exchange, the US had to agree to permit the Soviet 120, Backfire, Tu-26 supersonic bombers that would not count under their sub-ceiling of 1,320 launchers.

By the time these agreements were hammered out, the 1976 election campaign was under way. President Gerald Ford faced a challenge from presidential hopeful Ronald Reagan, an opponent of SALT I and II. Fearing Kissinger's agreement with the Soviets would lose him the support of Republican conservatives, Ford repudiated it. SALT II was thus left in limbo while the Nation went through the throes of the Presidential campaign that brought Jimmy Carter to the White House. It was left up to President Carter to finish negotiating a treaty which candidate Carter had criticized for failing to offer arms reduction. With this background in mind, you will be playing the roles of important American and Soviet officials involved in these negotiations.

Activity 9: Student Exercises:

1. Identify or define and explain the relevance to the chapter of each of the following:

   a. SS-19, b. Backfire bomber, c. cruise missiles,
   d. SALT II ceiling and sub-ceiling, e. MIRV,
   f. IRBM, g. two trade-offs

2. US and USSR delegations will meet separately. Outsiders may listen in on US meetings, but not Soviet, and must write a report on what they heard. Soviet citizens may not listen in, however.

3. US and Soviet negotiators will decide which of their basic negotiating positions they wish to take. Each position will refer to the letter (A, B, or C) corresponding to their position, and deliver a three minute defense of their position.

4. Each delegation will evaluate the basic negotiation position taken by the other delegation, and deliver a three minute evaluation of their conclusions. Delegates may make statements stressing their countries' peaceful intentions, and the suspect motives of the other. Each nation must be aware that it is addressing America's allies, neutral nations, and American citizens.

5. Each delegation will prepare for head-to-head neogtiations with their opponents, making an item by item deal. Conversations may then take place anywhere in the classroom, as each delegate speaks directly to his/her counterpart in the other delegation. All deals made must be approved by the leader of each delegation. Third world countries, allies and American citizens may make suggestions and must take notes on what they heard.

6. If no deal is completed toward the end of the class, the teacher may send two students out from each delegation to make a deal, or instruct leaders to finish negotiations by the beginning of the next class.

7. Students should read the next chapter, learn how their issues were resolved at the SALT II talks, and be prepared to decide whether the US Senate should ratify the real SALT II Treaty.

8. Observers report to class what they heard during negotiations, and evaluate how well delegates played their roles.

Connections:

Prepare to negotiate the SALT II Treaty

1. Each member of the class will be assigned one of the following roles:

US Delegation

Security Advisor Zbigniew Breszinski
President Jimmy Carter
Senator Hnery Jackson
General Edward Rowny
Secretary of State, Cyrus Vance
Arms Control Agency Director, Paul Warnke

USSR Delegation

Premier Leonid Brezhnev
General Ivan Beletsky
Ambassador Anatoly Dobrynin
Foreign Minister Andrei Gromyko

also: Third World Nations, America's NATO Allies, US Citizens & USSR Citizens

The description of the following leaders represents a stereotype about each of them. Students might want to consider reading American and Soviet magazines from this time period to get a feeling for how accurate these descriptions are.

Secretary of State Cyrus Vance--although new in his position, has had experience in negotiating with the Soviets. Believes that reasonableness and patience can bring about a meaningful treaty in the interests of both sides. Is a team player and will generally do what his superiors require of him.

Arms Control Agency Director Paul Warnke--perhaps the most committed to real disarmament of any person at the talks. Believes that the history of previous negotiations have been a history of lost opportunities. For instance, failure to prohibit multiple warheads at SALT I, allowed the USSR as well as the US to deploy them. Fears the same will happen now with cruise missiles, unless the US is willing to give them up in exchange for a concession by the Soviets. Believes US with 70% of its missiles on submarines, need not fear Soviet SS-19's or a first strike. Thinks that the Soviets with 75% of their missiles on land are far more vulnerable. Does not have much patience with US military's pre-occupation of Soviet first strike capabilities against America's ICBM's.

USSR Delegation

General Ivan Beletsky--represents the thinking of the Soviet military establishment. Suspicious of America's intentions, does not want to give up any Soviet weapons, and is very worried about new

American technology like the cruise missile, which he would like to ban. Also very worried about US IRBM's, which can strike deep into the Soviet Union and give no more than twelve minutes warning by radar.

Premier Leonid Brezhnev--wants an agreement to address Soviet policy of detente and improving relations with the US. Suspects American innovations and new bargaining positions, that he regards as propaganda for domestic, US consumption. Hates references to 'human rights' violations in the Soviet Union, also regarded as propaganda. Would like some arms agreement that will permit the USSR to spend less money on arms, and more on meeting Soviet needs.

Ambassador Anatoly Dobrynin--in his many years as Soviet ambassador to the US built up a special relationship with US officials, especially Henry Kissinger. Excellent at back-door diplomacy. Trusts Americans more than other Soviet officials and is good in acting as a go-between.

Foreign Minister Andrei Gromyko--most experienced Soviet negotiator, having played major foreign policy role since World War II. Is a veteran at negotiating poker, never tipping his hand, and usually prefacing even minor concessions with a long lecture on Soviet innocence and good intentions in the face of hostility from the West. Does not so much play a role in formulating policy, as he does in carrying it out through diplomatic channels.

Third World

Non-white, developing countries, represent close to two-thirds of the world's population. Suspicious of the West due to the history. Wants arms race stopped and more attention paid to its own development.

US's NATO Allies

Do not want to be abandoned by the US; also opposed to speeding up the arms race.

US Citizens

"Doves"--want meaningful arms control, including an end to new weapons development. Would generally support Paul Warnke's position at the negotiations.

"Hawks"--fear US vulnerability to silo-busting 'modern heavies'; would generally support Senator Jackson and General Rowny.

Others

USSR Citizen

Concerned with building up the country economically and culturally. Money invested in arms takes away from resources and their development.

Options at SALT II

US and Soviet delegates will select from among the following plans, unless specifically prohibited. Please note, that each plan deals with the following essential points:

a. Total ceilings for all missiles and sub-ceilings for missiles with multiple warheads (MIRVs).

b. Soviet 'modern heavy' SS-19's or 18's, and US IRBM's based inEurope. (the latter are capable of hitting Soviet cities)

c. Soviet Backfire, supersonic bomber, and US cruise missiles, launched from US planes or from bases in Europe.

d. Development of new weapons, namely the US solid-fuel, mobile ICBM, the controversial MX, and the Soviet SS-16. The former is a considerable improvement over the US Minuteman III. It is a new missile, and has not been tested. The latter, has been developed as the SS-20, an IRBM. A third stage rocket converts this IRBM into an ICBM. This characteristic will make it difficult to verify whether limits on ICBM's are being adhered to.

Activity 10:

US Delegation

Security Advisor Zbigniew Breszinsky--harbors a deep distrust of the Soviets. Would like to negotiate a better agreement than the one his counterpart in the Nixon-Ford administration, Henry Kissinger, was pursuing.

President Jimmy Carter--newly elected President would like a bold and meaningful arms limitation agreement with the Soviets, that makes a significant reduction in both sides nuclear weapons. At the same time hopes to come up with a treaty that even such hard-liners as Senator Jackson will approve.

Senator Henry "Scoop" Jackson--though not actually at the negotiations, his advice was frequently sought because he has a large following in Congress and the nation. Feels that too much was given the Soviets at SALT I. Wants to see reduction of Soviet's 'modern heavies', considers the Soviet Backfire bomber a serious threat, and opposes any limits on US cruise missiles.

General Edward Rowny--considered a "Jackson" man at the negotiations,

Option 1. Essentially the Vladivostok Agreement (Open to USSR only)

a. Keep Vladivostok ceilings of 2,400 missile launchers with 1,320 sub-ceiling for MIRVed missiles.

b. Allow 300 Soviet modern heavies, either SS-18's, or SS-19's. Allow US IRBM in Europe not to count against its limit of 2,400 missile launchers.

c. Allow 120 Soviet Backfire bombers not to count against its sub-ceiling of 1,320 MIRVed launchers. Count US, B-52's with cruise missiles against US sub-ceiling of 1,320. Limit ground launched cruise missiles to range of 600 kilometers (400 miles)

d. Make no provisions regarding new weapons systems, as long as 2,400 and 1,320 ceiling and sub-ceiling was not violated.

Option 2. A Significant Breakthrough in Arms Reduction

a. Reduce Vladivostok ceilings from 2,400 to 1,900 for strategic nuclear missile launchers, and sub-ceiling from 1,320 to 1 150 for MIRVed missiles.*

b. Reduce Soviet 'modern heavies' from 300 to 150. Allow US's IRBMs in Europe not to count against its 1,900 celing or sub-ceiling of 1,150.

c. Count all Soviet Backfire bombers against their 1,150 sub-ceiling Count B-52's with cruise missiles against US sub-ceiling of 1,150. Put no limits on US deployment of ground launched cruise missiles with less than 1,500 mile (or 2,500 kilometer) range.

Option 3. A Treaty More Favorable to the US

a. Keep Vladivostok ceilings of 2,400 missile launchers with sub-ceiling of 1,320 for MIRVed missiles.

b. Reduce Soviet 'modern heavies' from 300 to 100. Allow US IRBMs in Europe not to count against its ceiling of 2,400.

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*Since the USSR already has the limit of 2,400 missile launchers, this reduction would force it to cut back its weapons, without requiring a similar sacrific by the US.

c. Count all Soviet Backfire bombers against its sub-ceiling for MIRVed missile launchers. Place no restrictions on air or ground launched cruise missiles.

d. Allow the US to develop, test, and deploy at least one more missile.

Option 4. A Treaty More Favorable to the Soviet Union

a. Keep SALT I ceiling of 2,400 missile launchers for USSR, and 1,700 launchers for the US.

b. Allow 300 Soviet 'modern heavies'. Count US IRBM's in Europe against its ceiling of 1,700 launchers.

c. Allow Soviet Backfire as an intermediate range bomber, not counted against Soviet ceilings. Limit all cruise missiles to 600 kilometers, and count US B-52's with cruise missiles against US ceilings.

d. Allow deployment of weapons such as SS-16's, that are in development stage, but not deployment of US MX which is not in development stage.

Connections:

Confidential Briefing for Soviet SALT Delegation

After being subjected to clear-cut US superiority in all phases of nuclear weapons for over twenty years, the Soviet Union is at last achieving rough equality of parity. Now the United States is trying to use arms limitation talks to accomplish on the negotiating table what it can no longer accomplish with its superior command of resources and technology. But the Soviet Union will not allow itself to be fooled by America's grandstand play for public opinion.

The Soviet's 'modern heavies' are not as the US claims intended as offensive weapons. They are only intended to give the US something to think about before attacking. As for the issue of why so many megatons, the answer is simple. Since the Soviets have more problems with accuracy than the Americans, Soviet weapons tend to be heavy.

The US must be crazy to think that the Soviet Union could even contemplate starting a nuclear war. The Soviet Union knows what all-out war means--the Soviet Union lost 20,000,000 killed during World War II. Furthermore, it is not the Soviets but American generals and politicians who talk about a pre-emptive strike, or a preventive war. And even if the Soviet Union wanted to launch a nuclear attack against the United States, it is wise enough to know that there is no way of avoiding a US counterattack. Even if the

Soviets could destroy every US ICBM, the US could demolish the Soviet Union with the 4,500 warheads carried on its nuclear submarines, the second leg of its Triad, and with its intercontinental bombers, the third leg. With these defenses, the US must be either lying or crazy to it think it is in any danger of losing its retaliatory power.

The Soviet Union is disturbed that the US is once again seeking superiority by another technical innovation in the arms race. Of course, the Soviets have come to expect this--after the US has pioneered in nuclear and thermonuclear weapons, intercontinental bombers, intercontinental missiles, multiple warheads, and now cruise missiles. In the 1970s the US snuck around the limitations imposed by SALT I in equipping its missiles with multiple warheads. Now it seeks to threaten the Soviet Union with cruise missiles. These weapons are dangerous because they cannot be spotted in time to defend against them. They fly too low for radar, and too fast to be hit by conventional defenses. By seeking to station these destablizing monsters in Euorpe, the arms race will be escalated once again.

Finally, let us remind you that the Soviet Union had come to an understanding with Henry Kissinger at Vladovostok in 1974, and was willing to complete the agreement in principle that was reached there. It will not allow the US to extract further concessions to those that were made at that time.

Sample Confidential Briefing for the US Delegation

The record of the Soviet Union over the past 30 years of negotiating arms agreements is well known. It has rejected every generous offer made by the US and its allies. Need we remind you that they rejected the Baruch Plan in 1946, and every other disarmament proposal made since. The excuse is usually that you don't want foreigners sticking their noses into secret places all over the Soviet Union. We wonder, do they have that much to hide? Why can't they act like United States? How can they expect the US to accept on blind faith the word of a government known the world over for its lies, deceits, and secrecy, and which denies even the most basic rights to its own citizens.

It is well known that while the Soviet Union complains of new weapons developed by the West, it secretly devotes major portions of its budget, thus depriving its own people, in order to build weapons of freightening proportions. While it is true that the US once had a commanding lead in the arms race, it needed these weapons to offset the powerful conventional army that the Soviets maintained ever since World War II.

The Soviet Union is not interested in achieving equality with the US in nuclear weapons, but in seeking superiority. How else can one explain the SS-18 and SS-19 with 25 megaton warheads, far larger than needed to hit any single target in the US. The Soviet Union is building weapons to wipe out entire fields of American ICBMs.

Another example of the Soviet's detemination to be first in nuclear capability is its Backfire bomber. The US too, had a supersonic bomber on its drawing boards, the B-1. But the US is not an aggressive nation, and decided against building the B-1. Yet, the Soviet Union not only insists on building this supersonic plane, but then has the nerve to claim it will not be used to strike targets in the US. Yet, it has the ability to reach the US, and can then refuel in mid-air and return to bases in the Soviet Union.

While the Soviet Union builds its own weapons of mass destruction, it attempts to prevent the US from obtaining the fruits of its own efforts. It attempted to outlaw the installation of multiple warheads on intercontinental missiles. It seeks to prohibit the cruise missile at SALT II. Undoubtedly, while pretending to be horrified that the US is deploying this weapon, the Soviets are secretly developing their own versions of it, probably with technology stolen from the US. We have a history of this with the atomic bomb. The tiger does not change its stripes.

Finally, we must point out that the Soviet Union's protesting its innocence and claiming to believe in peace fools no one. The only reason that the Soviets did not attempt to overwhelm the West with intercontinental bombers and ICBMs was that it lacked the resources to produce them. Their claims to favor disarmament and test ban treaties was only to mask their inability to compete. Now, like before, the Soviet Union tries to accomplish through arms control what it can't achieve through competition.

Connections:

Negotiating SALT II

This lesson provides materials to simulate the negotiation of the SALT II Treaty, including roles for six different Americans actually present at the negotiations, four Soviet delegates, and various Third World and NATO delegates, etc. The major issues actually discussed at SALT II are presented as three major tradeoffs--first, US Intermediate range ballistic missiles, in exchange for the Soviets keeping their 300 'modern heavies'; second, not counting the Soviet's Backfire Bomber in its allotted number of weapons, in exchange for permitting the US to introduce the cruise missile; and, finally, whether either side should be allowed to develop another missile system.

Students should come to class knowing the role assigned to them, and prepared to argue their position. It may be a good idea, however to start class by reviewing the major issues; students representing the US and the USSR should meet in their delegations and hammer out a negotiating position--each, in effect will be a battle ground for "hawks" and "doves" to convince their leader to accept their position. Delegates from NATO, Third World countries and American citizens are allowed to have a limited impact on the American delegation--but not the Soviet. You might address how accurate this role actually is.

Once each side has staked out its position, it writes it on the blackboard for all to see, and then must defend it against criticism. Each delegation will try to convince world opinion of the justness of its cause, and at the same time try to maintain an advantage over the other side.

After reading the real resolution of the SALT negotiations, teachers and students can draw parallels to what happened in real life as compared to the simulation. The similarities often are striking.

Since we are involved in trying to understand the reality about our own government and the USSR's government this, as in all materials in this curriculum, raises some important questions and problems. Perhaps students can skip back from the lessons and ask questions that address the difficulty of knowing what was/is actually heppening in the decision making process.

Activity 11: SALT II: How Much Disarmament is Enough?

Introduction:

Despite the superficial appearance of equality, the agreements are unequal both in their legal and in their practical effects. . . . there will be a continuous and large increase in Soviet capabilities during the term of the treaty.

Paul Nitze, Former Deputy of Secretary of Defense

We recognize the hardware limitation achieved in SALT II can contribute to our security by providing a cap on, or modest reductions in, numbers of strategically capable systems the Soviets can deploy.

General David C. Jones, US Air Force, Chairman, Joint Chiefs of Staff

Increase in Soviet capabilities, or cap on arms race? These statements signify totally differring views not only of SALT II, but also of the arms race, the advisability of negotiating with the Soviets, and America's defense requirements. Does one of these views seem generally correct?

From Kissinger to Carter

In 1976, as in many previous elections, the arms race was a major issue. Presidential hopeful Ronald Reagan criticized the uncompleted Treaty and President Gerald Ford, for being too soft on the Soviets. Stung by this criticism and facing a tough primary campaign, Ford rejected a compromise on the cruise missile-Backfire bomber issue negotiated by Henry Kissinger. Meanwhile, Presidential hopeful Jimmy Carter criticized Ford for not doing enough to limit armaments. The Nixon-Ford-Kissinger approach to SALT I and SALT II negotiations, candidate Carter claimed, was merely to slow down or cap the rate of growth in strategic-nuclear weapons. His administration, Carter promised, would seek an actual reduction of the terrifying nuclear weapons threatening to destroy both the US and the USSR.

After taking office in January, 1977, President Carter had to decide how to carry out the promises made by candidate Jimmy Carter. His immediate problem was the suspended SALT II negotiations, already in their fifth year. There were two major options open to him. The easiest would be to complete the talks by building on the Vladivostok agreement, and the cruise missile compromise rejected by Ford. Afterwards, Carter could seek the reductions in armaments he wanted in a SALT III agreement. In the meantime, however, the momentum of the arms race and the pressure on both sides to build and deploy new weapons systems would reduce the chances for real arms reduction. Carter therefore chose the second alternative. He decided to scrap the Vladivostok compromise, and draw up a new proposal for making deep cuts in both American and Soviet nuclear weapons.

In putting his own stamp on arms negotiations, Carter was assisted by his Secretary of State, Cyrus Vance, National Security Advisor Zbig Breszinsky, Secretary of Defense, Harold Brown, and Arms Control Director, Paul Warnke. Among those consulted by these advisors, few were as influential as Senator Henry "Scoop"Jackson. Jackson was known for advocating a strong defense and criticizing the SALT I Treaty. He opposed the first SALT agreement because it allowed the Soviets to keep their 300 'modern heavies' and their numerical advantage in missile launchers. An arms limitation treaty with Jackson's support would be far more likely to win Senate approval than one which the Senator opposed. However, any proposals tailored to Jackson's specifications, as we shall see, were unlikely to be accepted in Moscow.

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1. Congressional Digest, August-September, 1979, pp. 203 & 216.

Under the Nixon-Ford administrations, Henry Kissinger routinely sounded the Soviets out informally before presenting them with an official offer. His pipeline to the Kremlin was Soviet Ambassador Anatoly Dobrynin. Dobrynin often made suggestions on the wording and timing of proposals that made them more acceptable to his superiors than the original offers. President Carter and his National Security Advisor, Zbig Breszinski, decided against this behind the scenes approach. Instead, President Carter announced his new proposals at a news conference the day that Secretary of State Vance departed with them to resume SALT II negotiations in Moscow. At the same conference, Carter criticized the Soviet government's human rights violation, citing the recent case of a Soviet dissident.

New Proposals and Angry Reactions

Soviet reactions to the new disarmament proposals could hardly have been less enthusiastic. Foreign Minister Andrei Gromyko characterized them as a 'cheap and shoddy manuever', aimed at giving the United States a 'unilateral advantage' in the arms race. He also threatened to further muddy the waters by opening up the old issue of not counting America's IRBM's in Western Europe. Acting under orders, Gromyko rejected the Carter initiative. To the dismay of the American negotiating team, he offered no counter proposal.

The proposal which so angered the Kremlin is summarized below. Why do you think the Soviets favored the Vladivostok agreement over this proposal? How might you have responded were you Soviet President Brezhnev?

- Reduce the number of launchers for each side from 2400 to 1900, and the number of MIRVed missile launchers from 1320 to 1150. (At that time, the USSR had about 2400 ICBMs, and the US had fewer than 1700)

- Limiting both sides to 550, land-based, intercontinental ballistic missiles of the 1150 allowed launchers whereas the Vladivostok agreement had only stipulated that the Soviets could not exceed the limit of 300, SS-18's and 19's. (This would force the USSR to abandon most of its ICBM's without imposing a similar hardship on the US.)

- Not count Soviet Backfire bombers as strategic weapons as opposed the 120 limit under the Vladivostok agreement. Limit US ground launched cruise missiles to 2,500 kilometer range as opposed 600 kilometer range under Vladivostok.

- Replace Vladivostok silence on issue of new development and deployment within the limits of the accord, with a prohibition on US development of MX, and Soviet deployment of SS-16's.

The SALT II Treaty

After more than two years of painfully slow progress, frequent faltering, and growing Soviet-American hostilities, the SALT negotiators finally reached a common understanding. With the last dispute committed to diplomatic language the Treaty was completed, May 7, 1979. In June, President Jimmy Carter and Premier Leonid Brezhnev met in Vienna, Austria to sign the Treaty that had taken six and on-half years to negotiate. Completed, it ran for 31 pages, including eight pages for the Treaty itself, one page of protocol, seventeen of "agreed statements and understandings," a half page statement on the Backfire bomber, a memorandum of understanding and a page of data listing numbers of launchers in each nation's arsenal. The major portions of this complex agreement are summarized below:

- Ceiling of 2,250 missile launchers with a sub-ceiling of 1200 MIRVed ICBMs and SLBMs combined, of which only 820 could be ICBMs (up to 1200 could be SLBMs.

- A freeze on 'modern heavy' ICBMs, and new SLBM launchers. IRBMs stationed in Europe would not be counted against US missiles.

- A limit of 120 US strategic bombers armed with cruise missiles; each missile limited to 600 kilometers. Limit of 120 Backfire bombers for USSR, that would not be counted under its limit of MIRVed missiles.

- Each party would be allowed to test and deploy one more ICBM, (MX for the US, SS-16 (probably) for the USSR)

To Ratify or Not to Ratify

Some critics of the Treaty cite alleged Soviet advantages, both in the agreement and in the arms race in general. They point to the inadequate limits placed on the Backfire bomber, failure to reduce the number of SS-18s and 19s (and with this Soviet advantage in these silo busting missiles written into the agreement), and crimping US deployment of cruise missiles. They claim the Treaty leaves the US behind in nuclear as well as in conventional arms, is unenforceable, subject to massive Soviet violations, and opens the US up for a potential Soviet first-strike attack.

Some supporters of the Treaty cite the arms celings in the Treaty hurt the Soviets far more than the US. They claim the Soviet modern heavies are no greater threat than other ICBMs and point out that the US decided against building similar weapons inthe 1960s. Supporters argue the US is still far ahead in accuracy, number of warheads, and, with the SLBM, in unvulnerable (protected) missile launchers. Violations, they believe, can be detected by satellite surveillance and spying, and Soviet conventional forces are no great threat in Europe where the US deploys tactical nuclear weapons.

The great irony of the SALT II negotiations is they took so long to complete, that the Treaty was overtaken by events. The Soviet Union's invasion of Afghanistan coupled with rumors of another Soviet attempt to deploy IRBMs in Cuba so soured US-USSR relations, that President Carter did not even submit the Treaty to the Senate. He thought it would fail to win the 2/3rds vote needed to ratify it. Presidential candidate Ronald Reagan's outspoken criticism of the Treaty helped prevent ratification. But, after a year of President Reagan's calls for dramatic increases in the US defense budget with an emphasis on nuclear weapons to intimidate the Soviets, public opinion in America rapidly shifted to favoring arms reduction. Bowing to this tide, President Reagan promised to abide by the terms of the SALT agreement. (As of November, 1982, both sides have complied)

Activity 12: Student Exercises:

1. Looking at the Statistics:

   What statistics would

   a. The Pentagon use to say the US was in an inferior position?
   b. The Kremlin use to prove the USSR was in an inferior position?
   c. The Swiss use to say both sides had achieved parity (a balance)?
   d. The United Nations use to suggest "enough is enough?"

2. Considering both an American and Soviet perspective, compare President Carter's SALT II proposals to the Vladivostok agreement. You may wish to think about feasibility and the term "meaningful arms reduction" as you compare.

3. How would you account for the series of delays in completing the SALT II Treaty? What do you think can be learned from studying this history that may help future arms limitation negotiators? Explain.

4. Analyze the SALT II Treaty. Your analysis should consider the resolution of the 'modern heavy'--IRBM & Backfire bomber-cruise missile controversies, as well as the effects of the Treaty on US and USSR ICBMs and SLBMs.

Activity 13: Problems of Statistical Comparisons

The figures below are from a study done by the Congressional Research Service, for the United States Congress. (Report No. 82-162 5, US/Soviet Military Balance: Statistical Trends, 1970-1981. October 1981 updated September 15, 1982) Page 18, Table 6, Ballistic Missile Submarines/SLBMs

	1981
SUBMARINES	
By Type	
United States	
Nuclear	32
Diesel	0
	32
Soviet Union	
Nuclear	71
Diesel	14
	85
US STANDING	-53

Connections:

Ask students to react to the numbers. What questions do they have? Consider the following:

The figures, in themselves, indicate a huge disparity between the two forces, and, taken by themselves, seem to put the United States at a tremendous disadvantage. But, there are other considerations. A study of a world map reveals that Soviet submarines have few exists into the world's waterways--around the Scandinavian Peninsula, through the very narrow exits from the Baltic Sea, through narrow passage between Asiatic and European Turkey and then the Mediterranean Sea, or from ports in Eastern Siberia. Their surveillance and interdiction are made much easier in these constricted passageways. Due to a scarcity of trained crews, the Soviet submarines spend much less time on patrol than US submarines. In fact, only about 10 percent of Soviet submarines are on patrol at any given time. The United States, on the other hand, has two crews for each boat. One is always ready to relieve the incoming patrol. This helps the US keep anywhere from 40 to 60 percent of our submarines on patrol at all times. The biggest difference, however, is in the numbers of SLBMs each country carries. Look at this chart taken from the same source:

	1981
WARHEADS	
United States	
MIRV	4960
Other	16
	4976
Soviet Union	
MIRV	624
Other	809
	1433
US STANDING	+3543

(NOTE: These charts in their original form were not intended to show qualitative advantages or disadvantages, but to show trends in force buildup.)

It is important for students to become skilled at asking questions of all information and particularly the number comparisons.

Activity 14: "The Price of Peace and Freedom" available from American Security Council (film)

Connections:

This film requires that students use the information they have acquired in a careful and critical analysis of a film. Teachers' experience with this film suggests showing only the first 15 or 20 minutes, because after a while the weight of the information becomes overpowering. After viewing this film, students can write in their journals how they felt watching the images, etc. What questions did it raise for them?

Teachers need to be fairly direct in processing this film with the class. Who made the film? Are the facts correct? Is the Russian translation correct? What did the filmmaker want the viewer to believe? What was the film's view of Soviet arms? How did the music and photography effect the audience response?

The Institute for Defense and Disarmament Studies has produced a fairly detailed rebuttal of the facts as presented in their film. The American Security Council has issued a counter rebuttal. The Numbers Game activity will hopefully help students resolve some of the issues. The stakes are very high in this nuclear age and informed decision making requires some understanding that so-called facts require interpreting.

An additional film is "Countdown" a film that opposes the freeze, also available from the American Security Council.

Activity 15: "War Without Winners" available from Institute for Defense and disarmament, Washington, D.C.

As you watch the film, look for the various reasons the narrator says nuclear war would be a war without winners. Note the evidence that the narrator and film producer have chosen. When you have finished viewing the film you will be asked to discuss the film's point, its evidence and techniques. Do you think the film has made a valid point?

Connections:

War Without Winners, a complex film made to support the SALT II Treaty, has been chosen to complement this section of the curriculum because it restates many of the issues raised in the curriculum, raises issues about what actions individuals and groups can take to insure their having a voice in the decision-making process, and provides an example of how visual images and words are combined to state a position.

Teachers may wish to show the film through once and then, on a second screening, stop the projector at the end of each subsection (economics, military preparations, social implications, physical destruction, "chump's game," future for children) and discuss each section. Do students agree with the point of the film? How does the film make them feel?

Warnke and LaRoque wanted people to lobby for SALT II, but the treaty was never ratified, perhaps because of American misgivings about the terms and perhaps because of the Soviet invasion of Afghanistan and American reaction to it. This might lead to a discussion exploring who should make the decision about complex treaties. What is the role of the citizen?

Compare this film to The Price of Peace and Freedom. What were the goals of the film makers? How are they both a form of propaganda? Which movie was more "emotional"?

Activity 16: The Iron Triangle

Many reasons may be cited for the continual array of unsuccessful weapons failing to perform according to specifications, but frequently costing 400% of original estimates. One explanation about how weapons are procured is the intimate relationship between the military service officers who order their weapons, the defense contractors who produce them, and the Congressional Committees that advise the Government (and taxpayers) to pay for them. This group, which President Eisenhower had in mind when warning of the military-industrial complex, is frequently referred to as the "Iron Triangle."

In a review of a book by Gordon Adams entitled, The Iron Triangle, Newsweek magazine characterized this phenomenon as "the three sides of the United States defense triangle--the companies that build American weapons, the executive agencies that buy them, and the US Congress that raises the money that pays the bill."[2] By the end of the 1970s, Adams estimates, some 2,000 men moved back and forth between jobs with the Department of Defense, and the top eight defense contractors, Boeing, General Dynamics, Gruman, McDonnel Douglas, Northrop, Rockwell International, and United Technologies. One of these, General Alexander Haig, epitomized this relationship, having served as Supreme Commander of NATO, President of United Technologies, and Secretary of State. Two thousand retired armed service officers, later found employment with the top 100 defense contractors. "The movement of weaponry experts between industry and government jobs, frequently on the same project," Adams holds, "facilitates the easy flow of information and tends to blur the distinction between national security and corporate goals."[3]

The people whose career paths traveled the sides of the Iron Triangle were often connected by business, personnel, and even family ties. The steps they took in their dealings with one another resulted in the flow of billions of dollars worth of defense contracts. In the early 1950s and 1960s, defense contractors averaged a full 50% return on investment greater than firms not in defense-related industries. The United States Government picked up the tab for much of the preliminary projects conducted by defense contractors, some of which were never completed. However, random experiments sometimes resulted in the creation of new weapons systems, adopted by the Defense Department. They later not so incidentally were contracted to the firms that conceived of them--and finally copies by the Soviets, which the US then interpreted as a need to develop yet another weapon in order to stay ahead. Even the lobbying expenses of big defense contractors were paid by the Government, which thus helped support the expenses mounted in a campaign to get them to buy more weapons, most of which cost more than promised and failed to perform up to expectations.

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2. Newsweek, June 22, 1981.

3. Gordon Adams, "The Iron Triangle," The Nation, October 31, 1981, p. 442.

Failure to match performance expectations of past contracts, studies showed, had no effect on a company getting the next contract. As an officer from Rockwell International once let out, "everyone feeds at the public trough."

There also were rewards for Congressmen who helped award the lucrative contracts to firms. The Political Action Committees of the "Big Eight" donated more than $2 million to finance election campaigns of friendly lawmakers. Rewards also flowed into the districts which these Congressmen represented. For instance, Mendel River was able to attract big defense contractors to his district, Charleston, S.C. Within four years of his rise to the influential position of Chair, House Armed Service Committee, General Electric, McDonnell Douglas, and Lockheed Aircraft built plants among Rivers' constituents.

Activity 17: Student Exercises:

1. What do you think of the "Iron Triangle"? Can you imagine ways in which this source of inter-relationships could be helpful to the production of military weapons? Harmful? Are these alternatives to the "Iron Triangle"? Explain.
2. Evaluate the information given in this activity. What is the authors' bias? Why aren't military "successes" included in this discussion? Give this reading to someone involved in the military and open dialogue about the Iron Triangle. Imagine you were an executive of one of the companies mentioned in this activity. How might you feel upon reading this?

Connections: A Nuclear Symposium

How should the United States conduct its diplomacy and adapt its military posture in a nuclear age? A nuclear symposium offers an excellent opportunity for students to personally confront and synthesize material and consider this question. Witnessing and participating in clear debate and taking an informed stand on the various options are methods of personal involvement.

Students may be divided into groups to research a point of view, or teachers may prefer that they work alone. Presentations may take the form of formal, videotaped debate before an audience; less formal, prepared class presentations; and/or informal discussion. It may be worthwhile to discuss beforehand with students the value of civility in a debate. Can the class be seen, in any way, as a microcosm of the problems of debate in the Congress or United Nations.

Topics may be general--drawn from the chapter on negotiations: arms limitation, arms reduction, arms control, unilateral and/or bilateral, or continue arms race. Another more direct method is to choose four specific positions--continue as is, bilateral freeze at present levels, bilateral arms reduction, unilateral reduction.

Students, upon reviewing the many activities considered in this unit, may wish to suggest sub-topics each presentation should consider. Among those sub-topics are ethical position or theory on which the argument rests, political ease or difficulty of passage, specific facts which recommend it, effects on US and USSR, degree of verifiability, etc.

CHAPTER VIII:

COMPLEXITIES

Activity 1: The Soviet People

In the sequence of studies so far, you have examined many of the ways we come to have our opinions and feelings about the Soviet Union. A not untypical reaction from one student commenting about the Soviets was: "When I think of the Soviet Union, I don't think of people."

Comment on this in your journals. Why might this be so? What are some possible ways to begin to understand the Soviet people and their government? Why would we want to?

The writers you will be reading in this section have not only been acclaimed in Soviet academic circles, but are also read widely in the Soviet Union and have had a profound influence on the thinking and feelings of Soviet people generally. In addition, these stories have been chosen because they portray, from a Soviet point of view, human problems such as bravery, patriotism, love of family, progress, loss, aging, and loneliness. We hope this exercise will offer an opportunity to begin to answer the question: Who really are these people we call "the Soviets"?

Begin by writing in your journal the important things you know about the Soviet Union, including feelings as well as thoughts. Where and from whom did you learn what you know?

Connections:

The following section on the Soviet Union has been, without question, the most difficult one to present. In preparing this, we have been mindful of the difficult demands which this curriculum places on us all. There are many hard and disturbing questions to be asked in the area of our knowledge of the Soviet Union and its people.

We have chosen these lessons as an entry point to begin to grapple with difficult questions that address the issue, "What about the Russians?" In this process many students as well as teachers begin to realize how limited their knowledge of the Soviet Union is. Sometimes what is helpful at this point is for students to list in their journals what they would like to know.

Activity 2: Vassily Shukshin's "Outer Space, the Nervous System, and a Slab of Fatback" (p. 256)

How do the old man and the boy differ in their views of education and progress? Is the conflict between the old man and the boy common in our culture?

Are there features of the story which seem particularly Soviet as opposed to American? In what sense is the story universal? What can we say about the themes of loneliness and the generations in Soviet and American societies?

Activity 3: Mikhail Sholokov's "The Fate of a Man" (p. 261)

Write in journals: What ideas do you get about the Soviet Union from reading this story? What are the main characteristics of the hero? Which of the qualities of this Soviet hero do you identify with?

Connections:

The hero's attitude toward the Nazis awakened in a number of students the awareness that in the past the United States and the Soviet Union were able to ally with each other in the face of a common threat. Might this not be possible again today in the face of the common threat of nuclear war?

Activity 4: Alexei Tolstoy's "The Russian Character" (p. 277)

What ethnic group is your family from? List ethnic stereotypes and general character traits associated with that group. List some characteristics of Americans. If you were going to choose one common everyday incident that would show the American character, what would it be? Write a story called "The American Character" based on that incident. Exchange stories with another classmate, and decide what your classmate wanted to show about American character in his/her version.

Read Alexei Tolstoy's "The Russian Character."

What is Tolstoy trying to show about the Russian character as he sees it? Discuss further whether it is possible to say that a nation has certain qualities that are unique to its people and compare such features to what we might call universal human qualities.

Connections:

We usually rely on three sources of information for our views of the Soviet Union: American journalists reporting from the Soviet Union, experts in Russian Studies Institutes at American universities, and Soviet citizens who have emigrated from their homeland. Without doubting that each of these sources conveys some measure of truth, it is important to continue the process, outlined in previous lessons of the curriculum, of looking for bias and asking questions to determine the truth.

Teachers may want to include interpretations about the Soviet Union and help students discover the bias. We have not included these views because they are widely accessible and have chosen to present these lessons because of the Soviet voices they represent.

We are trying to discover who the Soviets are, what is their connection to their government? Are they evil? Do the people have anything to say in their government? Their lives?

Can we object to some of their policies, as we do with our own government, and still respect them as people? How do people gain respect? How does a government gain respect? From its own people? From the oeople of other countries? Some U.S. government officials feel that the Soviets are incorrigible enemies and should not be respected. What are the costs of this attitude?

The following excerpt from a speech by our former ambassador to the Soviet Union, George Kennan, given at Dartmouth University in 1981, suggests a rationale for why we must confront how we get our information and re-examine our assumptions about the Soviet Union:

> "But, all this being said, I must go on and say that I find the view of the Soviet Union that prevails today in large portions of our government, so extreme, so subjective, so far removed from what any sober scrutiny of external reality would reveal, that it is not only ineffective but dangerous as a guide to politcal action."
>
> "This endless series of distortions and oversimplifications; this systematic dehumanization of the leadership of another great country; this routine exaggeration of Moscow's military capabilities and of the supposed iniquity of Soviet intentions; this monotonous misrepresentation of the nature and the attitude of another great people -- and a long-suffering people at that, sorely tried by the vicissitudes of this past century; this ignoring of their pride, their hopes -- yes, even their illusions (for they have their illusions, just as we have ours; and illusions, too, deserve respect); this reckless application of the double standard to the judgement of Soviet conduct and our own; this failure to recognize, finally, the commonality of many of their problems and ours as we both move inexorably into the modern technological age; and this corresponding tendency to

view all aspects of the relationship in terms of a supposed total and irreconcilable conflict of concerns and of aims; they are the marks of an intellectual primitivism and naivety, because there is a naivety of cynicism and suspicion just as there is a naivety of innocence.

"And we shall not be able to turn things around,...until we learn to correct these childish distortions -- ... until we consent to see they're another great people, one of the world's greatest, in all its complexity and variety, embracing the good with the bad, a people whose life, whose views, whose habits, whose fears and aspirations, whose successes and failures are the products...not of any inherent iniquity but of the relentless discipline of history, tradition, and national experience...If we insist...on viewing them as total and incorrigible enemies... dedicated to nothing other than our destruction -- that, in the end, is the way we shall assuredly have them, if for no other reason than that our view of them allows for nothing else either for them or for us."

Additional materials about the Soviet Union are available from Imported Publications, Inc., 320 West Ohio St., Chicago IL 60610, (312) 787-9018. Imported Publications yearly publishes a catalogue of books in English available from the Soviet Union. In addition, they publish a listing of journals and newspapers which appear in several languages including Russian and English. One such magazine is a weekly on international affairs, New Times. This magazine presents an account of the Soviet government's view of major international controversies and reflects what Soviet citizens are learning about these events from their government.

OUTER SPACE, THE NERVOUS SYSTEM AND A SLAB OF FATBACK *

VASSILY SHUKSHIN

Old Naum Yevstigneyich had a terrible hangover. He was lying on his bed over the stove, groaning.

Regularly, once a month, when he drew his pension, Yevstigneyich used to get drunk, after which he would be laid up for three days at a stretch. "They're kicking me with their hooves, all the devils in hell are kicking me, I'm giving up the ghost...."

Fifteen-year-old Yurka, his lodger, was sitting at the table with books spread all over it, doing his homework.

"I'm giving up the ghost, Yurka."

"You shouldn't have drunk so much."

"You're too young to talk like that."

A pause. Yurka's pen went on scratching.

But the old man wanted to talk—it gave him some relief.

"What else am I to do if I don't drink! Must do something to mark the month."

"Why?"

"I'm a human being, ain't I?"

"Hm.... You talk as if you were living in the time of serfdom," Yurka leaned back on his bentwood chair and eyed his landlord scornfully. "In those days they used to believe that everyone ought to drink."

"How do you know what it was like in those days?" The old man looked down from above with a grimace of pain and curiosity. Yurka sometimes surprised him with his knowledge and, though he never gave in, he liked listening to the lad. "How d'you know? You're only a stripling."

"We've been through that period."

"Your teachers told you about it, did they?"

"Yes, they did."

"How do *they* know? There's not an old man among 'em."

"From books."

"From books.... They don't happen to know why a man's sick on the morning after, do they?"

"Intoxication of the organism by fusel oil."

"Oil?! In vodka?"

"Yes."

Yevstigneyich felt very ill, but he couldn't help uttering a croaky laugh.

"That's where study gets you."

"D'you want me to show you the formula? I'll prove it to you in black and white right now...." Yurka picked up a chemistry textbook, but the old man gave a groan and clutched his head.

"Oo-oh!... It's coming over me again! Now I'm done for...."

"Take a hair of the dog that bit you then! Why suffer like this?"

The old man made no response to this suggestion. He could have done with another drink to sober up with, but he grudged the money. On the whole, he was a stingy old blighter. He lived well enough, drew a decent pension and his sons and daughter in town helped him out. His cellar was stocked with all kinds of provisions—fatback that he had salted down the year before, pickled cucumbers, cabbage, water melons, mushrooms.... It was like a regular food store with its vats, tubs, baskets and barrels. In his larder he had a sack and a half of good flour and a leg of ham weighing about fifty pounds. In his vegetable garden there was a potato clamp, last year's but still not used up, from which he was feeding his pigs, ducks and chickens. When he wasn't ill, he would be up before dawn and pottering about his plot till dark. Often he would go down into the cellar, sit on the bottom step and ponder. "Dratted devils! Why couldn't they live here!" he would mutter to himself as he climbed back into the daylight. This remark referred to his sons and daughter. He hated them for having left him and gone to live in town.

With Yurka it was different. His home was in the next village, where there was no ten-year school. He had no father. His mother had three other children besides himself to look after. His father had been drowned while rafting timber. The three other children were all younger than Yurka. His mother worked day and night, she was so keen on Yurka finishing his ten years at school. So was Yurka. In fact, he dreamed of going to college. To become a surgeon.

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The old man, however, seemed not to notice Yurka's poverty and charged him five rubles a month. They did their cooking separately, each for himself. Sometimes, towards the end of the month Yurka would run out of provisions. The old man would cast many a sidelong glance at the boy eating his dry bread, before he asked, "Run short, have you?"

"Uh-huh."

"I'll let you have something and you can make it up after."

"All right."

The old man would weight out a couple of kilograms of millet and Yurka would make himself some gruel.

Of a morning they would stand at the stove, chatting.

"Still want to finish your studies, do you?"

"Yes, I do. I'm going to be a surgeon."

"How much longer will that take?"

"Eight years. Medical school takes six years, not five, like the others."

"You'll peg out before you get to be a surgeon, I reckon. How's your mother going to find the money?"

"I'll get a grant. Other boys do it.... There are two from our village going through college on their grants."

The old man would stare into the fire, evidently remembering his own children.

"What's the mighty attraction of town?"

"Education ... that's the attraction. When you're a surgeon you can go back to the country and work. Personally, I'd rather work in the country."

"Do they earn such a mighty lot at it then?"

"Who? Surgeons?"

"Aye."

"Certainly not. They get very little, less than anyone. They had an increase recently, I know. But still..."

"Then what's the sense in straining your guts out for so many years? Go and train as a driver, then get a job. Look how much they earn! And then there's what they make on the quiet, delivering wood to someone and statefarm hay to someone else. You'd be a help to your mother then. She's got three others on her hands, you know."

Yurka would be stuck for a reply to that. The mention of his mother and younger brothers hurt. Of course, it was hard for mother.... But this talk only made him all the more resentful of the old man.

"We'll manage," he would say curtly. "That's no one else's business."

"Stands to reason," the old man assented. "They've got you all mixed up with this here studying, set you all a-wandering, like...." He failed to find a suitable comparison. "We used to live all right before without any study—by God's grace. We never went hungry."

"That's all you can think of—what it was like before!"

"And why not?... Now they've made all them aeroplanes—the filthy things."

"You'd rather go by cart, I suppose?"

"What's so bad about that? If I go by cart at least I know I'll get there in my own good time. But if you have a crash in one o' them aeroplanes, there's no picking up the pieces afterwards."

And so they carried on every morning, until Yurka went off to school. The old man had to unburden himself to face the long day of silence; Yurka, on the other hand, though irritated by the old man's tiresome grumbling, derived some satisfaction from defending the New—the aeroplanes, education, town life, books, the cinema....

Strangely enough, the old man did not believe in God either.

"They've nothing better to do, them whimperers, so all they do is wail," he would say about religious folk. "Work—that's the only answer. Then there'll be peace and plenty."

But by working he meant only for yourself, on your own bit of land, your own vegetable plot. Like in the old days. He had stopped working for the collective farm long ago, though some of the old men of his age were still doing their bit—looking after the hives, keeping an eye on the crops, or doing a job as watchmen.

"You've got a kulak deviation," Yurka told the old man one day when he was cross with him.

The old man held his peace when he heard that. Then he said in a strange manner, "Arise, ye cursed by the earth!" And cleared his nostrils noisily, by blowing first through one, then the other. Then he wiped his nose with the hem of his shirt and concluded. "You'd have made a good commissar, you would. They used to be young 'uns, the commissars, in those days."

Yurka felt flattered.

"Cursed *of* the earth, not *by*..." he corrected the old man.

"Don't come out with that one, about the kulak deviation,

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or they'll be chopping a chunk off my allotment. I've got a whole strip more than what I'm entitled to."

"You can keep it, for all I care."

"It's gone off a bit now," the old man said after a while. "Everything went dark before my eyes."

Yurka didn't want to talk any more. He had his homework to do.

"What are you learning about now?"

"Astronomy," Yurka replied curtly, implying that he had no desire for conversation.

"What's that about?"

"Outer space. Where our cosmonauts fly to."

"Gagarin, eh?"

"Not only Gagarin. There are a lot of them now."

"Why do they fly there? What for?"

"That's a fine question!" Yurka again leaned back on his chair. "You certainly ask them! Think they'd be better off lying on top of a stove, do you?"

"Stove! Stove! You're always poking that at me!" the old man burst out offendedly. "Live as long as I have, then you can talk."

"I didn't say it to offend you. But fancy asking why people are pioneering outer space! That really is...."

"Well, explain it to me than. What do they teach you for? So that you can bite an old man's head off?"

"Well, in the first place, space exploration is a—a necessity. There'll come a time when people will land on the Moon. And later on they'll fly to Venus. And on Venus there may be other people living there. Won't it be interesting to have a look at them?"

"Are they like us?"

"That I can't say for sure. They may be a bit uglier because the atmosphere there is different—more pressure."

"They'll be wanting to fight us, I expect."

"Why should they?"

"What are you here for, they'll say." The old man's interest was awakened. "An uninvited guest is worse than a Tatar, as the saying goes."

"They won't do anything of the kind. They'll be as glad as we are. No one knows yet who's more intelligent—perhaps they are. Then we'll be able to learn from them. And when we've developed our technology, we can fly further on...."

Yurka himself was captivated by the prospects unfolding before mankind. He jumped up and started pacing about the room. "We don't yet know how many planets there are that resemble our Earth! There may be millions! And living, thinking creatures on all of them. We'll fly to and fro to see each other.... And in the end there'll be a—a universal man. We'll all be the same."

"Going to marry each other, are you?"

"I'm talking about education! Somewhere perhaps there are beings that are so developed we can all learn from them. Perhaps they've discovered everything already and we're only taking the very first steps. Then we shall be able to live in that state of bliss that religion calls paradise. Suppose you want to see your sons from just where you are now, up there on the stove. Go ahead, switch on the video set, tune in to the right wave and here they are, talk as much as you like. Or perhaps you want to pay a visit to your daughter, nurse your little grandson for a bit? Up you go onto the roof, start a small helicopter and in *x* minutes you'll be at your daughter's house. And your grandson.... How old's your grandson now?"

"Seven."

"He'll read to you aloud from *War and Peace* because his development will be much faster than it is today. And medicine will make such progress that people will live to be a hundred or a hundred and twenty."

"Now that's laying it on a bit too thick."

"Why?! Scientists are working on that very problem today. A hundred and twenty is considered the normal lifespan. We haven't got sufficient data as yet, but we'll borrow it from our neighbours in the Galaxy."

"Can't you manage it yourselves, so that we'll all live to be a hundred and twenty?"

"No, that we can't manage yet. It's a slow process. Perhaps we'll get to the stage when we'll live to be a hundred and twenty, but not in the near future. It'll be quicker to build a spaceship to fly to a Galaxy where that problem may have been solved already. They may have discovered some medicine...."

"You wouldn't want to live a hundred and twenty years anyway. You'd get tired of it."

"*You* might not, but others will be glad to. There'll be a special medicine...."

"You and your 'medicine' ... you might at least discover a medicine to take off a hangover. My head—it feels as if they'd been brewing vodka in it."

"You shouldn't drink."

"Go to...."

They fell silent.

Yurka sat down to his books again.

"This will be, that will be—that's all you can talk about," the old man began again. "Like talking big, you do. You, for instance, are going to study for sixteen years, but what'll you do for a man when he's about to die?"

"Cut something out of him."

"What's the use of that if his time's up?"

"I don't answer such ... ignorant questions."

"You've got no answer—that's why."

"No answer?... What about all these people!" Yurka scooped up an armful of books and pointed to them. "Haven't they any answer? Have you ever read even one of them?"

"There's nothing to read in'em—just a pack of lies."

"Very well!" Yurka jumped up and started pacing the room again. "There used to be a disease called plague, didn't there?"

"Used to be. Back in 'twenty...."

"Where is it now? Is there any about?"

"Lord forbid! It might come back...."

"That's just the point—it won't. We've learnt how to combat it. Take another example. Suppose you were bitten by a mad dog, what would happen to you?"

"I'd get rabies."

"Yes, and you would have died. But now you get forty injections and it's all over. You're safe. Tuberculosis was considered incurable, wasn't it? But now? Six months' treatment and a man's right as rain! Who thought of all this? Scientists! 'Lies'.... You ought to keep quiet if you can't understand."

Yurka's attack put the old man on his mettle.

"All right. I'll let you have it about the dog. But what about snake-bite? What could the doctors do about that? But the old leach-woman, she'd come and whisper a charm and it'd pass off in no time. And she never studied at no institutes."

"It wasn't a fatal bite, that's all."

"Go and try it. Just let a snake take a nip at you...."

"By all means! I'll have an injection beforehand and it can bite me for all it's worth—I'll only smile."

"A swelled head, that's what you've got!"

"But here they are!" Yurka pointed at the books again. "People tried these things out on themselves! Do you know that when Academician Pavlov was dying he called in his students and started dictating to them a description of every stage in his own death."

"How could he?"

"Like this. 'My feet are going cold', he says, 'make a note of that.' So they put that down. Then he lost all sensation in his hands. So he tells them, 'My hands have gone numb.' ".

"And they were writing it all down?"

"Yes. Then his heart began to fail and he told them to note that. They were crying their eyes out, of course, but they wrote it down." Yurka felt his own eyes beginning to smart with tears. The story made a deep impression on the old man too.

"What then?"

"Then he died. But he told them everything right up to the last moment, because it was needed for science. And you with your leach-women would leave us in ignorance for another thousand years.... 'This used to be, that used to be!...' Did you have this in the old days?!" Yurka went over to the wall and plugged in the radio. A woman was singing. "Where is she? She's not here, is she?"

"Who isn't?"

"The woman that's singing."

"But that comes over the wires."

"Not wires but radio waves! Wires! The wires are only here in the village. But she may be singing somewhere on Sakhalin—do you think the wires stretch all that way?"

"Could be. Last year, when I went to see Vanka, there was wires hanging from poles all the way."

Yurka decided to drop the argument.

"It's no use talking to you. I've got my homework to do."

"Get on with it then."

"But you keep distracting me...." Yurka sat down at the table, put his hands over his ears and started reading.

For a long time there was no sound in the cottage.

"Is there a picture of him?" the old man asked at last.

"Who?"

"That scientist, the one who was dying."

"Academician Pavlov? Here he is."

Yurka handed the old man a book, pointing out the photograf of Pavlov. The old man studied it seriously and at great length.

"He was an old fellow by then."

"He was hale and hearty right up to old age, and never got drunk like ... some people." Yurka took the book back. "And he didn't lie in bed over a stove, cursing and swearing. He used to play *gorodki* right up to the last day when he was taken ill. And the number of dogs he operated on to show their reflexes!... It's thanks to him we know about the nervous system. Why are you sick now?"

"Because of my hangover. I know that without Pavlov telling me."

"Yes, it's a hangover all right, but yesterday you crushed your nervous system, damped it down, and today it's ... straightening up. You've developed a conditioned reflex. As soon as you draw your pension you must have a bottle of vodka. You can't do without it." Yurka almost enjoyed proving to the old man so calmly and convincingly how much harm his drinking was doing to him. The old man listened. "So what must you do? You must overcome this reflex. You draw your pension at the post-office. You set off for home, but your feet take you in the direction of the village shop. So what you must do is walk straight past it. Or go by another street altogether."

"I'll only feel worse."

"You'll feel worse once, twice, three times. Then you'll get used to it. You'll walk calmly past the village shop and laugh at the idea of going in."

The old man raised himself on his elbow and with trembling fingers rolled a cigarette and lit it. He took one drag and began to cough.

"Oh, damn and blast it.... Ach!... Turns me inside out, it does. Well, I'll be damned!"

Yurka sat down to his books again.

The old man climbed wheezily down from the stove ledge, put on his boots and sheepskin, picked up a knife and went out into the covered porch.

Where's he off to now, Yurka wondered.

The old man was gone for a long time. Yurka was about to go and see what had become of him going out like that, with a knife. But at that moment he reappeared, carrying a slab of fatback as big as his hand.

"Got any bread?" he asked sternly.

"Yes. Why?"

"Here you are then. Have some fat on it, or you'll work yourself to a frazzle with them Academicians of yours—before you've studied 'em all."

Yurka didn't know what to say.

"I won't be able to pay you back. We haven't got any...."

"Eat up, lad. There's a teapot on the stove. It's still hot, I reckon.... Make a proper meal of it."

Yurka fetched the teapot from the stove, poured himself a mug of still warm tea, cut the bread and fatback into slices and started eating. The old man climbed back on to the ledge above the stove with some difficulty and looked down from there at Yurka.

"How's the fatback?"

"Very good!" Yurka said in English. "First rate!"

"You have to know how to feed a pig. Some people are daft and start feeding it up in autumn. Then there's nothing but fat, no meat at all. And with some it's the other way round—they starve the animal because they think it'll be more lean. Not everyone likes fat, you see. Then when they kill the beast, there's neither fat nor lean. But what you have to do is feed it up for a week, then go easy for a bit, on half rations, then feed it up for another week, then go easy again.... Then you'll get it in layers—a layer of fat, a layer of lean. And it takes skill to do the salting...."

Yurka listened and tucked into the chilled, appetising bacon fat, which really was tasty.

"This is fine. Thanks a lot."

"Full up?"

"Uh-huh." Yurka cleared away the bread and the teapot. There was still some fat left. "Where do I put this?"

"Take it out into the porch and leave it on the tub. You can have some more in the evening."

Yurka took the fatback into the porch, returned, patted his tummy and said cheerfully, "Now I'll be able to think better. Sitting all the time like this makes your head swim a bit."

"That's right," the old man said contentedly, stretching out again on his back. "O-oh! Blast it all!... It all comes back at you as soon as you lie down."

"Shall I run and buy you a half bottle?" Yurka offered.

The old man said nothing for a while.

"It'll go off. Later on you can throw the chickens a bit of corn and a fork or two of hay for the cow. Only don't forget to shut the gate after you."

"All right. Now what have we got left? Geography. We'll be through that in two ticks." Yurka was in high spirits. He had made a good meal, his homework was almost finished; he would be able to go skiing this evening.

"What about his own kith and kin? Didn't he have any?" the old man asked all of a sudden.

"Who?"

"That Academician. Was there only students there?"

"Pavlov, you mean? There may have been relatives too. I don't know for sure. I'll ask at school tomorrow."

"He'd have had some children, wouldn't he?"

"Probably, I'll find out tomorrow."

" 'Course he did. He couldn't have dictated much without his own folk round him. It's hard being alone."

Yurka decided not to argue. He could have said, what about the students! But he left it at that.

"Of course," he agreed. "It's hard being alone."

THE FATE OF A MAN

MIKHAIL SHOLOKHOV

For Yevgenia Grigoriyevna Levitskaya.
Member of the CPSU since 1903

There was a rare drive and swiftness in the spring that came to the upper reaches of the Don in the first year after the war. At the end of March, warm winds blew from the shores of the Azov Sea and in two days the sandy left bank of the river was bare; in the steppe, the snow-choked gullies and ravines swelled, the streams burst the ice and flooded madly, and the roads became almost completely impassable.

At this unfavourable time of the year it so happened that I had to make a journey to the village of Bukanovskaya. The distance was not great—only about sixty kilometres—but it turned out to be hard going. My friend and I set out before sunrise. The pair of well-fed horses strained at the traces and could scarcely pull the heavy wagon. The wheels sank axle-deep into the damp mush of sand mixed with snow and ice and in an hour creamy-white flecks of foam appeared on the horses' flanks and thighs and under the narrow breech bands, and the fresh morning air was invaded by a sharp, intoxicating smell of sweat and warm harness lavishly smeared with tar.

Where the going was particularly heavy for the horses we got out and walked. It was hard to walk through the slushy snow, which squelched under our boots, but the roadside was still coated with a glittering crust of ice, and there it was even harder. It took us about six hours to do the thirty kilometres as far as the ford over the River Yelanka.

At the village of Mokhovsky the little river, almost dry in summer, had now spread itself over a full kilometre of marshy water meadows, overgrown with alders. We had to make the crossing in a leaky flat-bottomed boat that could not take more than three people at the most. We sent wagon and horses home. In a collective-farm shed on the other side an old and battered jeep that had been standing there most of the winter was awaiting us. The driver and I, with some misgivings, climbed into the unsteady little craft. My friend stayed behind on the bank with our belongings. We had scarcely pushed off when little fountains of water came spouting up through the rotten planks. We plugged them with anything we could lay hands on and kept bailing until we reached the other side. It took us an hour to reach the far bank of the river. The driver fetched the jeep from the village and went back to the boat.

"If this perishing old tub doesn't fall to bits in the water," he said, picking up an oar, "I'll be back with your friend in a couple of hours. At the earliest."

The village lay a good distance from the river, and down by the water there was the kind of stillness that falls on deserted places only late in the autumn or at the very beginning of spring. The air over the water was damp and bitter with the smell of rotting alders, but from the distant steppes bathing in a lilac haze of mist a light breeze brought the eternally young, barely perceptible aroma of earth that has not long been liberated from the snow.

Not far away, on the sand at the water's edge, lay a broken wattle fence. I sat down on it to have a smoke but, when I put my hand in my jacket pocket, I discovered to my dismay that the packet of cigarettes I had been carrying there was soaked. On the way across a wave had slapped over the side of the wallowing boat and splashed me to the waist in muddy water. There had been no time to think of my cigarettes, for I had to drop my oar and start bailing as fast as I could to save us from sinking, but now, vexed at my own carelessness, I drew the sodden packet gingerly out of my pocket, got down on my haunches and began laying out the moist brownish cigarettes one by one on the fence.

It was noon. The sun shone as hot as in May. I hoped the cigarettes would soon dry. It was so hot that I began to regret having put on my quilted army trousers and jacket for the journey. It was the first really warm day of the year. But it was good to sit there alone, abandoning myself completely to the stillness and solitude, to take off my old army cap and let the breeze dry my hair after the heavy work of rowing, and to stare idly at the white big-breasted clouds floating in the faded blue.

Presently I noticed a man come out on the road from behind the end cottages of the village. He was leading a little boy by the hand; about five or six years old he was, I reckoned, not more. They tramped wearily towards the ford, but, on reaching the jeep, turned and came in my direction. The man, tall and rather stooped, came right up to me and said in a deep husky voice:

"Hullo, mate."

"Hullo." I shook the big rough hand he offered me.

The man bent down to the little boy and said: "Say hullo to Uncle, son. Looks as if he's another driver like your dad. Only you and I used to drive a lorry, didn't we, and he goes about in that little bus over there."

Looking straight at me with eyes that were as bright and clear as the sky, and smiling a little, the boy boldly held out a pink cold hand. I shook it gently and asked: "Feeling chilly, old man? Why's your hand so cold on a hot day like this?"

With a touching childish trustfulness the boy pressed against my knees and lifted his little flaxen eyebrows in surprise.

"But I'm not an old man, Uncle. I'm only a boy, and I'm not chilly either. My hands are cold because I've been making snowballs."

Taking the half-empty rucksack off his back, the father sat down heavily beside me and said: "This passenger of mine is a regular young nuisance, he is. He's made me tired as well as himself. If you take a long stride he breaks into a trot; just you try keeping in step with a footslogger like him. Where I could take one pace, I have to take three instead, and so we go on, like a horse and a tortoise. And you need eyes in the back of your head to know what he's doing. As soon as you turn your back, he's off paddling in a puddle or breaking off an icicle and sucking it like a lollipop. No, it's no job for a man to be travelling with someone like him, not on foot anyway." He was silent for a while, then asked: "And what about you, mate? Waiting for your chief?"

I didn't want to tell him I was not a driver; I answered:

"Looks as if I'll have to."

"Is he coming over from the other side?"

"He will be."

"Do you know if the boat will be here soon?"

"In about two hours."

"That's quite a long time. Well, let's take it easy, I'm in no hurry. Just saw you as I was walking past, so I thought to

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myself there's one of us, drivers, enjoying a spot of sunshine. I'll go over and have a smoke with him, I thought. No fun in smoking alone, any more than in dying alone. You're doing well, I see, smoking cigarettes. Got them wet, eh? Well, mate, wet tobacco's like a doctored horse, neither of them any good. Let's have a go at my old shag instead."

He pulled a worn silk pouch out of the pocket of his thin khaki trousers, and as he unrolled it, I noticed the words embroidered on the corner: "To one of our dear soldiers, from a pupil of Lebedyanskaya Secondary School."

We smoked the strong home-grown tobacco and for a long time neither of us spoke. I was going to ask him where he was making for with the boy, and what brought him out on such bad roads, but he got his question in first:

"At it all through the war, were you?"

"Nearly all of it."

"Front-line?"

"Yes."

"Well, I had a bellyful of trouble out there too, mate. More than enough of it."

He rested his big dark hands on his knees and let his shoulders droop. When I glanced at him sideways I felt strangely disturbed. Have you ever seen eyes that look as if they have been sprinkled with ash, eyes filled with such unabating pain and sadness that it is hard to look into them? This chance acquaintance of mine had eyes like that.

He broke a dry twisted twig out of the fence and for a minute traced a curious pattern in the sand with it, then he spoke:

"Sometimes I can't sleep at night, I just stare into the darkness and I think: 'What did you do it for, life? Why did you maim me like this? Why did you punish me so?' And I get no answer, either in darkness, or when the sun's shining bright.... No, I get no answer, and I'll never get one!"

He checked himself, nudged his little son affectionately and said: "Go on, laddie, go and play down by the water, there's always something for little boys to do by a big river. Only mind you don't get your feet wet."

While we had been smoking together in silence, I had taken a quick look at father and son and one thing about them had struck me as odd. The boy was dressed plainly but in good stout clothes. The way the long-skirted little coat with its soft lining of worn beaver lamb fitted him, the way his tiny boots had been made to fit snugly over the woollen socks, the very neat darn that joined an old tear on the sleeve of the coat, all these things spoke of a woman's hand, the skilful hand of a mother. But the father's appearance was quite different. His quilted jacket was scorched in several places and roughly darned, the patch on his worn khaki trousers was not sewn on properly, but was tacked on with big, mannish stitches; he was wearing an almost new pair of army boots, but his thick woolen socks were full of holes. They had never known the touch of a woman's hand. Either he's a widower, I decided, or there's something wrong between him and his wife.

He watched his son run down to the water, then coughed and again began to speak, and I listened with all my attention.

"To start with, my life was just ordinary. I'm from the Voronezh Province, born there in 1900. During the Civil War I was in the Red Army, in Kikvidze's division. In the famine of 'twenty-two I struck out for the Kuban and worked like an ox for the kulaks, wouldn't be alive today if I hadn't. But my whole family back home, father, mother and sister, starved to death. So I was left all alone. As for relatives anywhere, I hadn't got a single one, not a soul. Well, after a year I came back from the Kuban, sold up my home and went to Voronezh. First I worked as a carpenter, then I went to a factory and learned to be a fitter. And soon I married. My wife had been brought up in a children's home. She was an orphan. Yes, I got a good woman there! Good-tempered, cheerful, always anxious to please. And smart she was, too—no comparison with me. She had known what real trouble was since she was a kid. I dare say that had an effect on her character. Just looking at her from the side, as you might say, she wasn't all that striking, but, you see, I wasn't looking at her from the side, I was looking straight at her. And for me there was no more beautiful woman in the whole world, and there never will be.

"I'd come home from work tired, and bad-tempered as hell sometimes. But no, she'd never fling your rudeness back at you. She'd be so gentle and quiet, couldn't do enough for you, always trying to make you something nice to eat, even when there wasn't enough to go round. It made my heart lighter just to look at her. After a while I'd put my arm round her and say: 'I'm sorry, Irina dear, I was damn rude to you. I had a rotten day at work today.' And again there'd be peace between us, and my mind would be at rest. And you know what that means for your work, mate? In the morning I'd be out of bed like a shot and off to the factory, and any job I laid hands on would go like clockwork. That's what it means to have a real clever girl for a wife.

"Sometimes I'd have a drink with the boys on pay-day. And sometimes, the scissor-legged way I staggered home afterwards, it must have been frightening to watch. The main street wasn't wide enough for me, let alone the side streets. In those days I was tough and strong and I could hold a lot of drink, and I always got home on my own. But sometimes the last stretch would be in bottom gear, you know. I'd finish it on my hands and knees. But again I'd never get a word of reproach, no scolding, no shouting. My Irina, she'd just laugh at me, and she did that careful like, so that even drunk as I was I wouldn't take it wrong. She'd pull my boots off and whisper: 'You'd better lie next to the wall tonight, Andrei, or you might fall out of bed in your sleep.' And I'd just flop down like a sack of oats and everything would go swimming round in front of me. And as I dropped off to sleep, I'd feel her stroking my head softly and whispering kind words, and I knew she felt sorry for me.

"In the morning she'd get me up about two hours before work to give me time to come round. She knew I wouldn't eat anything after being drunk, so she'd get me a pickled cucumber or something like that, and pour me out a good glass of vodka—a hair of the dog, you know. 'Here you are, Andrei, but don't do it any more, dear.' How could a man let someone down who put such trust in him? I'd drink it up, thank her without words, just with a look and a kiss, and go off to work like a lamb. But if she'd said a word to cross me when I was drunk, if she'd started snapping at me, I'd have come home drunk again, believe me. That's what happens in some families, where the wife's a fool. I've seen plenty of it and I know.

"Well, soon the children started arriving. First there was a little boy, then two girls. And that was when I broke away from my mates. I started taking all my pay home to the wife; we had a fair-sized family by then, and I couldn't afford to drink any more. On my day off I'd have just a glass of beer and let it go at that.

"In 'twenty-nine I got interested in motors, I learned the job and started driving a lorry. And when I got into the way of it I didn't want to go back to the factory. Driving seemed to be more fun. And so I lived for ten years without noticing how the time went by. It was like a dream. But what's ten years? Ask any man over forty if he's noticed how the years have been slipping by. You'll find he hasn't noticed a damned thing! The past is like that distant steppe way out there in the haze. This morning I was crossing it and it was clear all round, but now I've covered twenty kilometres there's a haze over it, and you can't tell the trees from the grass, the ploughland from the meadow.

"Those ten years I worked day and night. I earned good money and we lived no worse than other folk. And the children were a joy to us. All three did well at school, and the eldest, Anatoly, turned out to be so bright at mathematics that he even got his name in one of the Moscow papers. Where he inherited this great gift from, I couldn't tell you, mate. But it was certainly flattering, and I was proud of him; mighty proud I was!

"In ten years we saved up a bit of money and before the war we built ourselves a little cottage with two rooms, a storeroom and a covered porch. Irina bought a couple of goats. What more did we want? There was milk for the children's porridge, we had a roof over our heads, clothes on our backs, shoes on our feet, so everything was all right. The only thing was the site, it wasn't a very good place to build. The plot of land I got was not far from an aircraft factory. If my cottage had been somewhere else, my life might have turned out different.

"And then it came—war. The next day I had my call-up papers, and the day after it was 'Report to the station'. All my four saw me off together: Irina, Anatoly, and my daughters, Nastenka and Olyushka. The kids took it well, though the girls couldn't keep back a tear or two. Anatoly just shivered a bit as if he was cold; he was getting on for seventeen by that time. But my Irina.... I'd never seen anything like it in all the seventeen years we'd lived together. My shirt and shoulder had stayed wet all night with her tears, and in the morning she was at it again. We got to the station and I felt so sorry for her I couldn't look her in the face. Her lips were all swollen, her hair was poking out from under her shawl, and her eyes were dull and staring, like someone's who's out of his mind. The officers gave the order to get aboard but she flung herself on my chest, and clasped her hands round my neck. She was shaking all over, like a tree that's being chopped down. The children tried to

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talk her round, and so did I, but nothing helped. Other women chatted to their husbands and sons, but mine clung to me like a leaf to a branch, and just trembled all the time, and couldn't say a word. 'Take a grip on yourself, Irina dear,' I said. 'Say something to me before I go, at least.' And this is what she said, with a sob between every word: 'Andrei ... my darling ... we'll never ... never see each other again ... in this world....'

"There was I with my heart bursting with pity for her, and she says a thing like that to me. She ought to have understood it wasn't easy for me to part with her. I wasn't going off to a party either. And I lost my temper! I pulled her hands apart and gave her a push. It seemed only a gentle push to me, but I was strong as an ox and she staggered back about three paces, then came towards me again with little steps, arms outstretched and I shouted at her: 'Is that the way to say good-bye? Why do you want to bury me before I'm dead?!' But then I took her in my arms again because I could see she was in a bad way."

He broke off suddenly and in the silence that followed I heard a faint choking sound. His emotion communicated itself to me. I glanced sideways at him but did not see a single tear in those dead, ashy eyes of his. He sat with his head drooping dejectedly. The big hands hanging limply at his sides were shaking slightly; his chin trembled, and so did those firm lips.

"Don't let it get you down, friend, don't think of it," I said quietly, but he seemed not to hear me. Overcoming his emotion with a great effort, he said suddenly in a hoarse, strangely altered voice:

"Till my dying day, till the last hour of my life I'll never forgive myself for pushing her away like that!"

He fell silent again and for a long time. He tried to roll a cigarette, but the strip of newspaper came apart in his fingers and the tobacco spilled on to his knees. In the end he managed to make a clumsy roll of paper and tobacco, took a few hungry pulls at it, then, clearing his throat, went on:

"I tore myself away from Irina, then took her face in my hands and kissed her. Her lips were like ice. I said good-bye to the kids and ran to the carriage, managed to jump on the steps as it was moving. The train started off very slow, and it took me past my family again. I could see my poor little orphaned kids bunched together, waving their hands and trying to smile, but not managing it. And Irina had her hands clasped to her breast; her lips were white as chalk, and she was whispering something, and staring straight at me, and her body was all bent forward as if she was trying to walk against a strong wind.... And that's how I'll see her in my memory for the rest of my life—her hands clasped to her breast, those white lips, and her eyes wide open and full of tears. That's mostly how I see her in my dreams too. Why did I push her away like that? Even now, when I remember it, it's like a blunt knife twisting in my heart.

"We were drafted to our units at Belaya Tserkov, in the Ukraine. I was given a three-tonner, and that's what I went to the front in. Well, there's no point in telling you about the war, you saw it yourself and you know what it was like to start with. I got a lot of letters from home, but didn't write much myself. Just now and then I'd write that everything was all right and we were doing a bit of fighting. We may be retreating at present, I'd say, but it won't be long before we gather our strength and give the Fritzies something to think about. And what else could you write? Those were grim times and you didn't feel like writing. And I must say I was never much of a one for harping on a pitiful note. I couldn't stick the sight of those slobbering types that wrote to their wives and girlfriends every day for no reason at all, just to rub their snot over the paper—oh, it's such a hard life, oh, I might get killed! And so he goes on, the son-of-a-bitch, complaining and looking for sympathy, blubbering away, and he can't understand that those poor women and kids are having just as bad a time of it back home as we are. Why, they were carrying the whole country on their shoulders. And what shoulders our women and children must have had not to give in under a weight like that! But they didn't give in, they stuck it out! And then one of those belly-achers writes his pitiful letter and that just knocks a working woman off her feet. After a letter like that, the poor thing won't know what to do with herself or how to face up to her work. No! That's what a man's for, that's what you're a soldier for—to put up with everything, if need be. But if you've got more woman than man in you, then go and put on a frilled skirt to puff out your skinny arse, so you can look like a woman, at least from behind, and go and weed the beet, or milk the cows, because your kind aren't needed at the front. The stink's bad enough there without you!

"But I didn't get even a year's fighting done. I was wounded twice, but only slightly both times, once in the arm, the second time in the leg. The first was a bullet from an aircraft, the second a chunk of shrapnel. The Germans holed my lorry, top and sides, but I was lucky, mate, at first. Yes, I was lucky all the time until I was real unlucky.... I got taken prisoner at Lozovenki in the May of 'forthy-two. It was an awkward set-up. The Germans were attacking hard and one of our 122 mm howitzer batteries had nearly run out of ammo. We loaded up my lorry chockful of shells. I worked on the job myself till my shirt was sticking to my back. We had to get a move on, because they were closing in on us; on the left we could hear the rumble of tanks, and firing on the right and in front, and things didn't look too healthy.

" 'Can you get through, Sokolov?' asks the commander of our company. He need never have asked. Was I going to sit twiddling my thumbs while my mates got killed? 'What are you talking about!' I told him. 'I've got to get through, and that's that'. 'Get cracking then,' he says, 'and step on it!'

"And step on it I did. Never driven like that before in my life! I knew I wasn't carrying a load of spuds, I knew I had to be careful with the stuff I'd got aboard, but how could I be, when the lads were fighting out there empty-handed, when the whole road was under artillery fire. I did about six kilometres and got pretty near the place. I'd have to turn off the road to get to the hollow where the battery was stationed, and then what did I see? Strike me, if it wasn't our infantry running back across the field on both sides of the road with shells bursting among them. What was I to do? I couldn't turn back, could I? So I gave her all she'd got. There was only about a kilometre to go to the battery, I had already turned off the road, but I never reached them, mate. Must have been a long-range gun landed a heavy one near the lorry. I never heard the bang nor anything, just something burst inside my head, and I don't remember any more. How I stayed alive, and how long I lay there by the ditch, I've got no idea. I opened my eyes, but I couldn't get up; my head kept jerking and I was shaking as if I had a fever. Everything seemed dark, something was scraping and grinding in my left shoulder, and my body ached all over as if somebody had been lamming into me for two days running with anything he could lay hands on. I squirmed about on my belly for a long time, and finally I managed to get up. But still I couldn't tell where I was, nor what had happened to me. My memory was clean gone. But I was scared to lie down. I was scared I'd never get up again, so I just stood there swaying from side to side like a poplar in a gale.

"When I came to and had a look round, my heart felt as if someone had got a pair of pliers round it. The shells I'd been carrying were lying about all round me. Not far away was my lorry, all buckled up, with its wheels in the air. And the fighting? The fighting was going on behind me. Yes, behind me!

"When I realised that, and I'm not ashamed to say it, my legs just caved in under me and I fell as if I'd been pole-axed, because I realised I was cut off behind the enemy lines, or to put it plainly, I was already a prisoner of the nazis. That's war for you.

"No, it is not an easy thing to take in, mate, it's not easy to understand the fact that you're a prisoner through no fault of your own. And it takes some explaining to a fellow who's never experienced it himself just what that thing means.

"So I lay there and soon I heard the tanks rumbling. Four medium German tanks went by me at full speed in the direction I'd come from. What do you think that felt like? Then came the tractors hauling the guns, and a mobile kitchen, then the infantry, not many of them, not more than a company all told. I'd squint up at them out of the corner of my eye and then I'd press my face into the earth again; it made me sick to look at them, sicker than I can say.

"When I thought they'd all gone past, I lifted my head, and there were six submachine-gunners marching along about a hundred paces away. And as I looked, they turned off the road and came straight towards me, all six of them, without saying a word. Well, I thought, this is it. So I got into a sitting position—I didn't want to die lying down—and then I stood up. One of them stopped a few paces away from me and jerked his gun off his shoulder. And it's funny how a man's made, but at that moment I didn't feel any panic, not even a shiver in my heart. I just looked at him and thought: 'It's going to be a short burst. I wonder where he'll place it? At my head or across my chest?' As if it mattered a damn to me what part of my body he made his holes in.

"Young fellow he was, pretty well built, dark-haired, but his lips were thin as thread, and his eyes had a nasty glint in them.

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That one won't think twice about shooting me down, I thought. And sure enough, up goes his gun. I looked him straight in the eye and didn't say anything. But another one, a corporal or something, he was older, almost elderly to look at—shouted something, then pushed the other fellow aside and came up to me. He babbled something in his own language and bent my right elbow. Feeling my biceps he was. 'O-o-oh!' he said, and pointed along the road to where the sun was setting, as much as to say: 'Off you go, you mule, and work for our Reich.' Thrifty type he was, the son-of-a-bitch!

"But the dark-haired one had got his eye on my boots and they looked a good sound pair. He signed to me to take them off. I sat down on the ground, took off my boots and handed them to him. Fair snatched them out of my hands, he did. So I unwound my footcloths and held them out to him, too, looking up at him from the ground. He shouted and swore, and up went his gun again. But the others just roared with laughter. Then they marched off. The dark-haired one looked round at me two or three times before he got to the road, and his eyes glittered like a wolf-cub's with fury. Anyone would think I'd taken his boots instead of him taking mine.

"Well, mate, there was nothing for it. I went on to the road, let out the longest and hottest Voronezh cuss I could think of, and stepped out westward—a prisoner! But I wasn't much good for walking by that time—a kilometre an hour was all I could do, not more. It was like being drunk. You'd try to go straight and something would just push you from one side of the road to the other. I went on for a bit and then a column of our chaps, from the same division as I'd been in, caught up with me. There were about ten German submachine-gunners guarding them. The one at the front of the column came up to me and, without saying a word, just bashed me on the head with his gun. If I'd gone down, he'd have stitched me to the ground with a burst, but our chaps caught me as I fell and hustled me into the middle of the column and half carried me along for a while. And when I came to, one of them whispered: 'Don't fall down for God's sake! Keep going while you've got any strength left, or they'll kill you!' And though I had pretty little strength left, I managed to keep going.

"At sunset the Germans strengthened their guard. They brought up another twenty submachine-gunners in a lorry, and drove us on at a quicker pace. The badly wounded ones that couldn't keep up with the rest were shot down in the road. Two tried to make a break for it, but they forgot that on a moonlit night you can be seen a mile away out in the open; of course, they got it too. At midnight we came to a village that was half burned down. They herded us into a church with a smashed dome. We had to spend the night on the stone floor without a scrap of straw. No one had a greatcoat, so there wasn't anything to lie on. Some of the boys didn't even have tunics, just cotton undershirts. They were mostly NCOs. They had taken off their tunics so they couldn't be told from the rank and file. And the men from the gun crews hadn't got tunics either. They had taken them off while working at the guns.

"That night it poured with rain and we all got wet to the skin. Part of the roof had been smashed by a heavy shell or a bomb and the rest of it was ripped up by shrapnel; there wasn't a dry spot even at the altar. Yes, we stood around the whole night in that church, like sheep in a dark pen. In the middle of the night I felt someone touch my arm and ask: 'Are you wounded, comrade?' 'Why do you ask, mate?' I says. 'I'm a doctor. Perhaps I can help you in some way?' I told him my left shoulder made a creaking noise and was swollen and hurt like hell. And he says firmly: 'Take off your tunic and undershirt.' I took everything off and he started feeling round my shoulder with his thin fingers. And did it hurt! I gritted my teeth and I says to him: 'You must be a vet, not a doctor. Why do you press just where it hurts most, you heartless devil?' But he kept on probing about, and he says to me, angry-like: 'Your job's to keep quiet. I won't have you talking to me like that! Hang on, it's going to hurt you properly now.' And then he gave my arm such a wrench that I saw stars.

"When I got my senses back I asked him: 'What are you doing, you rotten nazi? My arm's broken to bits and you give it a pull like that.' I heard him chuckle, then he said: 'I thought you'd hit out with your right while I was doing it, but you're a good-tempered chap, it seems. Your arm isn't broken, it was dislocated at the shoulder and I've put it back in its socket. Well, feeling better now?' And sure enough, I could feel the pain going out of me. I thanked him so he'd know I meant it, and he went on in the darkness, asking quietly: 'Any wounded?' There was a real doctor for you. Even shut up like that, in pitch darkness, he went on doing his great work.

"It was a restless night. They wouldn't let us out even to relieve ourselves. The guard commander had told us they wouldn't when he drove us into the church in pairs. And as luck would have it, one of the Christians among us wanted to go out bad. He kept on saving it up and at last he burst into tears. 'I can't pollute a holy place!' he says. 'I'm a believer, I'm a Christian. What shall I do, lads?' And you know the kind of chaps we were. Some laughed, others swore, and others started teasing him with all sorts of advice. Cheered us all up, he did, but it turned out bad in the end. He started bashing on the door and asking to be let out. And he got his answer. A nazi gave a long burst through the door with his submachine-gun. It killed the Christian and three more with him, and another was so badly wounded he died by morning.

"We pulled the dead into a corner, then sat down quiet and thought to ourselves, this isn't a very cheerful start. And presently we started whispering to each other, asking each other where we came from and how we'd got taken prisoner. The chaps who'd been in the same platoon or the same company started calling quietly to each other in the darkness. And next to me I heard two voices talking. One of them says: 'Tomorrow, if they form us up before they take us on farther and call out for the commissars, Communists, and Jews, you needn't try and hide yourself, platoon commander. You won't get away with it. You think just because you've taken off your tunic you'll pass for a ranker? It won't work! I'm not going to suffer because of you. I'll be the first to put the finger on you. I know you're a Communist, I remember how you tried to get me to join in the Party. Now you're going to answer for it.' That was the one sitting nearest to me, on the left, and on the other side of him, a young voice answers: 'I always suspected there was a bad streak in you, Kryzhnev. Specially when you refused to join the Party, pretending you were illiterate. But I never thought you'd turn out to be a traitor. You went to school until you were fourteen, didn't you?' And the other one answers in a casual sort of way: 'Yes, I did. So what?' They were quiet for a long time, and then the platoon commander—I could tell him by his voice—says softly: 'Don't give me away, Comrade Kryzhnev.' And the other one laughed quietly. 'You've left your comrades behind on the other side of the line,' he says, 'I'm no comrade of yours, so don't plead with me. I'm going to put the finger on you all the same. My own skin comes first with me.'

"They stopped talking after that, but the vileness of what I'd heard had given me the shivers. 'No,' I thought, 'I won't let you betray your commander, you son-of-a-bitch. You won't walk out of this church on your own two feet, they'll drag you out by the legs!' Then it began to get light and I could see a fellow with a big fleshy face lying on his back with his hands behind his head, and beside him a little snub-nosed lad, in only an undershirt, sitting with his arms round his knees and looking very pale. 'That kid won't be able to handle this great fat gelding,' I thought. 'I'll have to finish him off myself.'

"I touched the lad's arm and asked him in a whisper: 'You a platoon commander?' He didn't say anything, just nodded. 'That one over there wants to give you away?' I pointed to the fellow lying on his back. He nodded again. 'All right,' I said, 'hold his legs so he won't kick! And be quick about it! And I jumped on that fellow and locked my fingers round his throat. He didn't even have time to shout. I held him under me for a few minutes, then eased off a bit. That was one traitor less, with his tongue hanging out!

"But I felt rotten afterwards and I wanted to wash my hands something terrible, as if it wasn't a man I'd killed but some crawling snake. It was the first time I had killed anyone in my life, and the man I had killed was one of our own. Our own? No, he wasn't. He was worse than the enemy, he was a traitor. I got up and said to the platoon commander: 'Let's get away from here, comrade, the church is a big place.'

"In the morning, just as that Kryzhnev had said, we were all lined up outside the church with a ring of submachine-gunners covering us, and three SS officers started trying to pick out the ones among us they thought were dangerous—Communists, officers, and commissars. But they didn't find any. And they didn't find anybody who was swine enough to give them away either, because nearly half of us were Communists, and there were a lot of officers, too, and commissars. Out of over two hundred men they only picked four. One Jew and three Russians from the rank and file. The Russians landed in trouble because they were all dark and had curly hair. The SS men just came up to them and said: *'Jude?'* The one they asked said he was a Russian, but they wouldn't even listen. 'Step out!' and that was that.

"They shot the poor devils and drove us on further. The platoon commander who'd helped me strangle that traitor kept

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by me right as far as Poznan. The first day of the march he'd edge up to me every now and then and press my hand as we went along. At Poznan we got separated. It happened like this.

"You see, mate, ever since the day I was captured I'd been thinking of escaping. But I wanted it to be a sure thing. All the way to Poznan, where they put us in a proper camp, I never got the right kind of chance. But in the Poznan camp it looked as if I'd got what I wanted. At the end of May they sent us out to a little wood near the camp to dig graves for the prisoners that had died—a lot of our chaps died at that time from dysentery. And while I was digging away at that Poznan clay I had a look round and I noticed that two of our guards had sat down to have a bite; the third was dozing in the sun. So I put down my shovel and went off quietly behind a bush. Then I ran for it, keeping straight towards the sunrise.

"They didn't miss me right away, those guards. Where I found the strength, skinny as I was, to cover nearly forty kilometres in one day, I don't know myself. But nothing came of my effort. On the fourth day, when I was a long way from that damned camp, they caught me. There were blood-hounds on my track, and they sniffed me out in a field of unreaped oats.

"Daybreak had caught me in the open and it was at least three kilometres to the woods. I was afraid to go on in the daylight, so I lay low in the oats for the day. I crushed a few ears of grain in my hand and was filling my pockets with a supply, when I heard the barking of dogs and the roar of a motor-bike. My heart sank because the dogs kept coming nearer. I lay flat and covered my head with my arms, so they wouldn't bite my face. Well, they came up and it only took them a minute to tear all my rags off me. I was left in nothing but what I was born in. They dragged me about in the oats, and then a big dog got his forepaws on my chest and started making passes at my throat, but he didn't bite straightaway.

"Two Germans came up on motor-bikes. First they beat me up good and proper, then they set the dogs on me. And they tore into me. I was taken back to camp, naked and bloody as I was. They gave me a month in solitary for trying to escape, but I was still alive, I kept alive somehow.

"It's pretty grim, mate, to remember the things I went through as a prisoner, let alone tell you about them. When I remember all we had to suffer out there, in Germany, when I remember all my mates who were tortured to death in those camps, my heart comes up in my throat and it's hard to breathe.

"The way they shifted me about in those two years I was a prisoner! I reckon I covered half of Germany. I was in Saxony, at a silicate plant, in the Ruhr, hauling coal in a mine. I sweated away with a shovel in Bavaria, I had a spell in Thüringen, and the devil knows what German soil I didn't have to tread. There's plenty of different scenery out there, but the way they shot and bashed our lads was the same all over. And those damned bastards lammed into us like no man here ever beat an animal. Punching us, kicking us, beating us with rubber truncheons, or an iron bar if they happened to have one handy, not to mention their rifle butts and sticks.

"They beat you up just because you were a Russian, because you were still alive in the world, just because you worked for them. And they'd beat you for giving them a wrong look, taking a wrong step, for not turning round the way they wanted. They beat you just so that one day they'd knock the life out of you, so you'd choke with your own blood and die of beating. There weren't enough ovens in the whole of Germany, I reckon, for all of us to be shoved into.

"And everywhere we went they fed us the same—a hundred and fifty grams of ersatz bread, made half of sawdust, and a thin swill of swedes. Some places they gave us hot water to drink, some places they didn't. But what's the use of talking, judge for yourself. Before the war started I weighed eighty-six kilograms, and by the autumn I couldn't turn more than fifty. Just skin and bones, and hardly enough strength to carry the bones either. But you had to work, and not say a word, and the work we did would have been a lot too much for a cart-horse, I reckon.

"At the beginning of September they sent a hundred and forthy-two of us Soviet prisoners-of-war from a camp near Küstrin to Camp B-14, not far from Dresden. At that time there were about two thousand in that camp. We were all working in a stone quarry, cutting and crushing their German stone by hand. The stint was four cubic metres a day per man, and for a man, mind you, who could hardly keep body and soul together anyway. And then it really started. After two months, out of the hundred and forty-two men in our group there were only fifty-seven left. How about that, mate? Tough going, eh? We hardly had time to bury our own mates, and then there was a rumour in the camp that the Germans had taken Stalingrad and were pressing on into Siberia. It was one thing on top of another. They held us down so we couldn't lift our eyes from the ground, as if we were asking to be put there, into that German earth. And every day the camp guards were drinking and bawling their songs, rejoicing for all they were worth.

"One evening we came back to our hut from work. It had been raining all day and our rags were soaking; we were all shivering from the cold wind and couldn't stop our teeth chattering. There wasn't anywhere to get dry or warm, and we were as hungry as death itself, or even worse. But we were never given any food in the evenings.

"Well, I took off my wet rags, threw them on to my bunk and said: 'They want you to do four cubic metres a day, but one cubic metre would be plenty to bury one of us.' That was all I said, but, would you believe it, among our own fellows there was one dirty dog who went and reported my bitter words to the camp commandant.

"The camp commandant, or *Lagerführer*, as they called him, was a German called Müller. Not very tall, thick-set, hair like a bunch of tow; sort of bleached all over. The hair on his head, his eyelashes, even his eyes were a kind of faded colour, and he was pop-eyed besides. Spoke Russian like you and me, even had a bit of a Volga accent, as if he'd been born and bred in those parts. And could he swear! He was a terror for it. I sometimes wonder where the bastard ever learned that trade. He'd line us up in front of the block—that's what they called the hut—and walk down the line surrounded by his bunch of SS men with his right hand held back. He wore a leather glove and under the leather there was a strip of lead to protect his fingers. He'd walk down the line and bloody every other man's nose for him. 'Inoculation against flu', he used to call it. And so it went on every day. Altogether there were four blocks in the camp, and one day he'd give the first block their 'inoculation', next day it'd be the second, and so on. That bastard worked regular, never took a day off. There was only one thing he didn't understand, the fool; before he started on his round he'd stand out in front there, and to get himself real worked up for it, he'd start cursing. He'd stand there cursing away for all he was worth, and, do you know, he'd make us feel a bit better. You see, the words sounded like our own, it was like a breath of air from over there. If he'd known his cursing and swearing gave us pleasure, he wouldn't have done it in Russian, he'd have stuck to his own language. Only one of our fellows, a pal of mine from Moscow, used to get wild with him. 'When he curses like that,' he says, 'I shut my eyes and think I'm in Moscow, having one at the local, and it just makes me dizzy for a glass of beer.'

"Well, the day after I said that about the cubic metres, that commandant had me up on the mat. In the evening an interpreter and two guards came to our hut. 'Sokolov Andrei?' I answered up. 'Outside! Quick march! *Herr Lagerführer* wants to see you.' I guessed what he wanted me for. It was curtains. So I said good-bye to my pals—they all knew I was going to my death. Then I took a deep breath and followed the guards. As I went across the camp yard, I looked up at the stars and said good-bye to them too, and I thought to myself: 'Well, you've had your full dose of torture, Andrei Sokolov, Number 331.' I felt somehow sorry for Irina and the kids, then I got over it and began screwing up my courage to face the barrel of that pistol without flinching, like a soldier should, so the enemy wouldn't see how hard it'd be for me at the last minute to part with this life, bad though it was.

"In the commandant's room there were flowers on the window-sill. It was a nice clean place, like one of our clubs. At the table there were all the camp's officers. Five of'em, sitting there, downing schnapps and chewing bacon fat. On the table there was a big bottle, already open, plenty of bread, bacon fat, soused apples, all kinds of open tins. I took one glance at all that grub, and you wouldn't believe it, but I felt so sick I nearly vomited. I was hungry as a wolf, you see, and I'd forgotten what the sight of human food was like, and now there was all this stuff in front of me. Somehow I kept my sickness down, but it cost me a great effort to tear my eyes away from that table.

"Right in front of me sat Müller, half-drunk, flicking his pistol from one hand to the other, playing with it. He had his eye fixed on me, like a snake. Well, I stood to attention, snapped my broked-down heels together, and reported in a loud voice like this: 'Prisoner-of-war Andrei Sokolov at your service, *Herr Kommandant*.' And he says to me: "So, you Russian Ivan, four cubic metres of quarrying is too much for

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you, is it?' 'Yes, *Herr Kommandant*,' I said, 'it is.' 'And is one cubic metre enough to make a grave for you?' 'Yes, *Herr Kommandant*, quite enough and to spare.'

"He gets up and says: 'I shall do you a great honour. I shall now shoot you in person for those words. It will make a mess here, so we'll go into the yard. You can sign off out there.' 'As you like,' I told him. He stood thinking for a minute, then tossed his pistol on the table and poured out a full glass of schnapps, took a piece of bread, put a slice of fat on it, held the lot out to me and said: 'Before you die, Russian Ivan, drink to the triumph of German arms.'

"I had taken the glass and the bread out of his hand, but when I heard those words, something seemed to scald me inside. Me, a Russian soldier, I thought, drink to the victory of German arms? What'll you want next, *Herr Kommandant*? It's all up with me anyway. You can go to hell with your schnapps!

"I put the glass down on the table, and the bread with it, and I said: 'Thank you for your hospitality, but I don't drink.' He smiles. 'So you don't want to drink to our victory? In that case, drink to your own death.' What had I got to lose? 'To my death and relief from torment then,' I said. And with that, I took the glass and poured it down my throat in two gulps. But I didn't touch the bread. I just wiped my lips politely with my hand and said: 'Thank you for your hospitality. I am ready, *Herr Kommandant*, you can sign me off now.'

"But he was looking at me sharply: 'Have a bite to eat before you die,' he said. But I said to him: 'I never eat after the first glass.' Then he poured out a second and handed it to me. I drank the second and again I didn't touch the food. I was staking everything on courage, you see. Anyway, I thought, I'll get drunk before I go out into that yard to die. And the commandant's fair eyebrows shot up in the air. 'Why don't you eat, Russian Ivan? Don't be shy!' But I stuck to my guns: 'Excuse me, *Herr Kommandant*, but I don't eat after the second glass either.' He puffed up his cheeks and snorted, and then he gave such a roar of laughter, and while he laughed he said something quickly in German, must have been translating my words to his friends. The others laughed, too, pushed their chairs back, turned their big mugs round to look at me, and I noticed something different in their looks, something a bit softer-like.

"The commandant poured me out a third glass and his hands were shaking with laughter. I drank that glass slowly, bit off a little bit of bread and put the rest down on the table. I wanted to show the bastards that even though I was half dead with hunger I wasn't going to gobble the scraps they flung me, that I had my own, Russian dignity and pride, and that they hadn't turned me into an animal as they had wanted to.

"After that the commandant got a serious look on his face, straightened the two iron crosses on his chest, came out from behind the table unarmed and said: 'Look here, Sokolov, you're a real Russian soldier. You're a fine soldier. I am a soldier, too, and I respect a worthy enemy. I shall not shoot you. What is more, today our gallant armies have reached the Volga and taken complete possession of Stalingrad. That is a great joy for us, and therefore I graciously grant you your life. Go to your block and take this with you for your courage.' And he handed me a small loaf of bread from the table, and a lump of bacon fat.

"I clutched that bread to my chest, tight as I could, and picked up the fat in my other hand. I was so taken aback at this unexpected turn of events that I didn't even say thank you, just did a left about-turn, and went to the door. And all the while I was thinking, now he'll blast daylight through my shoulder-blades and I'll never get this grub back to the lads. But no, nothing happened. Again death passed me by and I only felt the cold breath of it.

"I got out of the commandant's room without a stagger, but outside I went reeling all over the place. I lurched into the hut and pitched flat down on the cement floor, unconscious. The lads woke me up next morning, when it was still dark. 'Tell us what happened!' Then I remembered what had happened at the commandant's and told them. 'How are we going to share out the grub?' the man in the bunk next to me asked, and his voice was trembling. 'Equal shares all round,' I told him. We waited till it got light. We cut up the bread and fat with a bit of thread. Each of us got a piece of bread about the size of a matchbox, not a crumb was wasted. And as for the fat—well, of course, there was only enough to grease your lips with. But we parcelled it out, fair shares all round.

"Soon they put about three hundred of the strongest of us on draining a marsh, then off we went to the Ruhr to work in the mines. And there I stayed until 'forty-four. By that time our lads had knocked some of the stuffing out of Germany and the nazis had stopped looking down on us, prisoners. One day they lined us up, the whole day-shift, and some visiting *Oberleutnant* said through an interpreter: 'Anyone who served in the army or worked before the war as a driver—one pace forward.' About seven of us who'd been drivers before stepped out. They gave us some old overalls and took us under guard to Potsdam. When we got there, we were split up. I was detailed to work in "Todt". That was what the Germans called the set-up they had for building roads and defence works.

"I drove a German major of the engineers about in an Opel-Admiral. Now that was a real nazi hog for you! Short fellow with a pot-belly, as broad as he was tall, and a back-side on him as big as any wench's. He had three chins hanging down over his collar in front, and three whopping folds round his neck at the back. Must have carried a good hundredweight of pure fat on him, I should think. When he walked, he puffed like a steam-engine, and when he sat down to eat—hold tight! He'd go on all day, chewing and taking swigs from his flask of brandy. Now and then I came in for a bit too. He'd stop on the road, cut up some sausage and cheese, and have a drink; and when he was in a good mood he'd toss me a scrap like a dog. Never handed it to me. Oh, no, he considered that beneath him. But, be that as it may, there was no comparing it to the camp, and little by little I began to look like a man again. I even began to put on weight.

"For about two weeks I drove the major to and fro between Potsdam and Berlin, then he was sent to the front-line area to build defences against our troops. And then I gave up sleep. All night long I'd be thinking how to escape to my own side, my own country.

"We arrived in the town of Polotsk. At dawn, for the first time in two years I heard the boom of our artillery, and you can guess how my heart thumped at the sound. Why, mate, even when I first started courting Irina, it never beat like that! The fighting was going on east of Polotsk, about eighteen kilometres away. The Germans in the town were sore as hell, and jumpy, and my old pot-belly started drinking more and more. During the daytime we would drive round and he'd give instructions on how to build the fortifications, and at night he'd sit by himself drinking. He got all puffy, and there were great bags under his eyes.

"Well, I thought, no need to wait any longer, this is my chance. And I'm not going to escape alone, I've got to take old pot-belly with me, he'll come in useful over there!

"In a heap of rubble I found a heavy iron weight and wrapped a rag round it, so that if I had to hit him there wouldn't be any blood. I picked up a length of telephone wire in the road, got everything I needed ready, and hid it all under the front seat. One evening, two days before I said good-bye to the Germans, I was on my way back from the filling station and I saw a German *Unter* staggering along blind drunk, grabbing at the wall. I pulled up, led him into a damaged building, shook him out of his uniform, and took his cap off his head. Then I hid the whole lot under the seat and I was ready.

"On the morning of June 29th, my major told me to take him out of town in the direction of Trosnitsa. He was in charge of some defences that were being built there. We drove off. The major was sitting on the back seat, taking a quiet doze, and I sat in front with my heart trying to jump out of my mouth. I drove fast, but outside the town I slowed down, then stopped and got out and had a look round; a long way behind there were two lorries coming on slowly. I got out my iron weight and opened the door wide. Old pot-belly was lying back on the seat, snoring as if he'd got his wife beside him. Well, I gave him a bang on the left temple with my iron. His head flopped on to his chest. I gave him another one, just to make sure, but I didn't want to kill him. I wanted to take him over alive. He was going to be able to tell our lads a lot of things. So I pulled the pistol out of his holster and shoved it in my pocket. Then I pushed a bracket down behind the back seat, tied the telephone wire round the major's neck and fastened it to the bracket. That was so he wouldn't tumble over on his side when I drove fast. I pulled on the German uniform and cap, and drove the car straight for the place where the earth was rumbling, where the fighting was.

"I ripped across the German front line between two pillboxes. A bunch of submachine-gunners popped up out of a dugout and I slowed down purposely so they would see I had a major with me. They started shouting and waving their arms to show me I mustn't go on, but I pretended not to understand and roared off at about eighty. Before they realised what was happening and opened fire I was on no man's land, weaving round the shell-holes no worse than a hare.

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"There were the Germans firing from behind, and then our own chaps got fierce and had a smack at me from the front. Put four bullets through the wind-screen and riddled the radiator. But not far away I spotted a little wood near a lake, and some of our chaps running towards the car, so I drove into the wood and got out. Then I fell on the ground and kissed it. I could hardly breathe.

"A young fellow, with khaki shoulder-straps on his tunic I'd never seen before, reached me first and says with a grin: 'Aha, you lousy Fritz, lost your way, eh?' I tore off my German tunic, threw the German cap down at my feet, and I says to him: 'You lovely young kid. Sonny boy! Me a Fritz when I was born and bred in Voronezh! I was prisoner-of-war, see? And now unhitch that fat hog sitting in the car, take his briefcase and escort him to your commander.' I handed over my pistol and was passed from one person to the next until evening when I had to report to the colonel in command of the division. By that time I had been fed and taken to the bath-house and questioned, and given a new uniform, so I went to the colonel's dugout in proper order, clean in body and soul, and properly dressed. The colonel got up from his table, and came over to me, and in front of all the officers there, he kissed me and said: 'Thank you, soldier, for the fine gift you brought us. Your major and his briefcase have told us more than any twenty Germans we might capture on the front line. I shall recommend you for a decoration.' His words and the affection he showed, moved me so much I couldn't keep my lips from trembling, and all I could say was: 'Comrade Colonel, I request to be enrolled in an infantry unit.'

"But the colonel laughed and slapped me on the shoulder. 'What kind of a fighter do you think you'd make when you can hardly stand on your feet? I'm sending you off to hospital straightaway. They'll patch you up there and put some food inside you, and after that you'll go home to your family for a month's leave, and when you come back to us, we'll think where to put you.'

"The colonel and all the officers that were in the dugout with him shook hands and said good-bye to me, and I went out with my head spinning because in the two years I'd been away I'd forgotten what it was like to be treated like a human being. And mind you, mate, it was a long time before I got out of the habit of pulling my head down into my shoulders when I had to talk to the high-ups, as if I was still scared of being hit. That was the training we got in those nazi camps.

"As soon as I got into hospital I wrote Irina a letter. I told her in a few words all about how I was taken prisoner and how I escaped with the German major. Just what made me boast like a kid, I couldn't tell you. Why, I couldn't even hold back from saying the colonel had promised to recommend me for a medal....

"For a couple of weeks I just slept and ate. They fed me a little at a time, but often; if they'd given me all the food I wanted, so the doctor said, I might have gone under. But after the two weeks were up, I couldn't look at food. There was no reply from home and, I must admit, I began to get mopy. Couldn't think of eating, sleep wouldn't come to me, and all kinds of bad thoughts kept creeping into my head. In the third week I got a letter from Voronezh. But it wasn't from Irina, it was from a neighbour of mine, a joiner. I wouldn't wish anyone to get a letter like that. He wrote that the Germans had bombed the aircraft factory, and my cottage had got a direct hit with a heavy bomb. Irina and the girls were at home when it dropped. There was nothing left, he wrote, only a deep hole where the house had been.... At first I couldn't finish reading that letter. Everything went dark before my eyes and my heart squeezed into a tight little ball so that I thought it would never open up again. I lay back on my bed and when I got a bit of strength back I read the letter to the end. My neighbour wrote that Anatoly was away in town during the bombing. He returned in the evening, took one look at the hole where his home had been, and went back to town the same night. All he told my neighbour, before he went, was that he was going to volunteer for the front.

"When my heart eased up and I heard the blood rushing in my ears, I remembered how Irina had clung to me when we parted at the station. That woman's heart of hers must have known all along we were not to see each other again in this world. And I had pushed her away.... Once I had a family, a home of my own, it had all taken years to build, and it was all destroyed in a flash, and I was left all alone. It must be a dream, I thought, this messed-up life of mine. Why, when I had been a prisoner, nearly every night, in my mind, of course, I had talked to Irina and the kids, tried to cheer them up by promising them I'd come home and they mustn't cry. I'm tough, I said, I can stand it, we'll all be together again one day. For two years I had been talking to the dead!"

The big man was silent for a minute. When he spoke again, his voice faltered. "Let's have a smoke, mate, I feel as if I was choking."

We lighted up. The tapping of a wood-pecker sounded very loud in the flooded woodland. The warm breeze still rustled the dry leaves of the alders, the clouds were still floating past in the towering blue, as though under taut white sails, but in those minutes of solemn silence the boundless world preparing for the great fulfilment of spring, for that eternal affirmation of the living in life, seemed quite different to me.

It was too distressing to keep silent and I asked:

"What happened then?"

"What happened then?" the story-teller responded reluctantly. "Then I got a month's leave from the colonel, and a week later I was in Voronezh. I went on foot to the place where I had once lived with my family. There was a deep hole full of rusty water. The weeds all round came up to your waist. It was empty and still as a graveyard. I felt it bad then, mate, I can tell you! I stood there in sorrow, then I went back to the station. I wasn't there more than an hour altogether. I went back to the division the same day.

"But about three months later I did get a flash of joy, like a gleam of sunlight through the clouds. I got news of Anatoly. He sent me a letter from another front. He had got my address from that neighbour of mine. It seems he'd been to an artillery school to start with; his gift for mathematics stood him in good stead there. After a year he graduated with honours and went to the front, and now he wrote he had been promoted to captain, was commanding a battery of 'forty-fives', and had been decorated six times. In a word, he'd left his old man far behind. And again I felt real proud of him. Say what you like, but my own son was a captain, and in command of a battery. That was something! And all those decorations too. It didn't matter that his dad was just carting shells and other stuff about in a Studebaker. His dad's time was past, but he, a captain, had everything ahead of him.

"At nights now I began weaving an old man's dreams. When the war was over I'd get my son married and live with them. I'd do a bit of carpentry and look after the kiddies. I'd do all the kind of things an old man does. But that all went bust too. In the winter we went on advancing without a break and there wasn't time to write to each other very often, but towards the end of the war, right up near Berlin, I sent Anatoly a letter one morning and got an answer the very next day. It turned out that he and I had come up to the German capital by different routes and were now very close to each other. I could hardly wait for the moment when we'd meet. Well, the moment came.... Right on the ninth of May, on the morning of Victory Day, my Anatoly was killed by a German sniper.

"The company commander sent for me in the afternoon. I saw there was a strange artillery officer sitting with him. I went into the room and he stood up as if he was meeting a senior. My C.O. said: 'The Colonel has come to see you, Sokolov,' and turned away to the window. Something went through me like an electric shock. I knew there was trouble coming. The lieutenant-colonel came up to me and said: 'Bear up, father. Your son, Captain Sokolov, was killed today at his battery. Come with me.'

"I swayed, but I kept my feet. Even now it seems unreal the way that lieutenant-colonel and I drove in that big car along those streets strewn with rubble. I've only a foggy memory of the soldiers drawn up in line and the coffin covered with red velvet. But my Anatoly I saw as plain as I can see you now, mate. I went up to the coffin. Yes, it was my son lying there, and yet it wasn't. My son had been a lad, always smiling, with narrow shoulders and a sharp little Adam's apple sticking out of his thin neck, but here was a young broad-shouldered, full-grown man, and good-looking too. His eyes were half-closed as if he was looking past me into the far distance. Only the corners of his lips still had a bit of the smile my son used to have. The Anatoly I knew once. I kissed him and stepped aside. The lieutenant-colonel made a speech. My Anatoly's friends were wiping their tears, but I couldn't cry. I reckon the tears dried up in my heart. Perhaps that's why it still hurts so much.

"I buried my last joy and hope in that foreign German soil, the battery fired a volley to send off their commander on his long journey, and something seemed to snap inside me. When I got back to my unit I was a different man. Soon after that I was demobbed. Where was I to go? To Voronezh? Not for anything! I remembered I had a friend who had been invalided

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out of the army back in the winter and was living in Uryupinsk; he had asked me to come and live with him. So I went.

"My friend and his wife had no children. They lived in a cottage of their own on the edge of the town. He had a disability pension, but he worked as a driver in a lorry depot and I got a job there too. I settled with my friend and they gave me a home. We used to drive various loads about the suburbs and in the autumn we switched over to grain delivery work. It was then I got to know my new son, the one that's playing down there in the sand.

"First thing you'd do when you got back from a long trip would be to go to a café for a bite of something, and, of course, you'd put away a glass of vodka to get rid of your tiredness. It's a bad habit, but I had quite a liking for it by that time, I must admit. Well, one day I noticed this lad near the café, and the next day I noticed him again. What a little ragamuffin he was! His face all smeared with watermelon juice and dust, dirty as anything, hair all over the place, but he'd got a pair of eyes like stars in the night sky, after it's been raining! And I grew so fond of him that, funny though it may seem, I started missing him, and I'd hurry to finish my run so I could get back to the café and see him sooner. That's where he got his food—he ate what people gave him.

"The fourth day I came in straight from the state farm with my lorry loaded with grain and pulled in at the café. There was my little fellow sitting on the steps, kicking his legs, and pretty hungry by the look of him. I poked my head out of the window and shouted to him: 'Hi, Vanya! Come on, jump aboard, I'll give you a ride to the elevator, and then we'll come back here and have some dinner.' My shout made him start, then he jumped down from the steps, scrambled on to the running board and pulled himself up to the window. 'How do you know my name's Vanya?' he says quietly, and he opens those lovely eyes of his wide, waiting for my answer. Well, I told him I was just one of those chaps who know everything.

"He came round to the right side. I opened the door and let him in beside me, and off we went. Lively little fellow he was, but suddenly he got quiet, and started looking at me from under those long curly eyelashes of his, and sighing. Such a little fellow and he'd already learned to sigh. Was that the thing for him to be doing? 'Where's your father, Vanya?' I asked. 'He was killed at the front,' he whispered. 'And Mummy?' 'Mummy was killed by a bomb when we were in the train.' 'Where were you coming from in the train?' 'I don't know, I don't remember....' 'And haven't you got any family at all?' 'No, nobody.' 'But where do you sleep at night?' 'Anywhere I can find.'

"I felt the hot tears welling up inside me and I made up my mind at once. Why should we suffer alone and separate like this! I'd take him in as my own son. And straightaway I felt easier in my mind and there was a sort of brightness there. I leaned over to him and asked, very quiet-like: 'Vanya, do you know who I am?' And he just breathed it out: 'Who?' And still as quiet, I says to him: 'I'm your father.'

"Lord alive, what happened then! He threw his arms round my neck, he kissed my cheeks, my lips, my forehead, and started hollering away like a little bird. Deafening it was. 'Daddy dear! I knew it! I knew you'd find me! I knew you'd find me whatever happened! I've been waiting so long for you to find me!' He pressed himself to me and he was trembling all over, like a blade of grass in the wind. My eyes were misty and I was trembling, too, and my hands were shaking.... How I managed to keep hold of the wheel I don't know. Even so I put her in the ditch and stopped the engine. While my eyes were so misty I was afraid to go, in case I knocked someone down. We sat there for about five minutes and my little son was still clinging to me for all he was worth, and not saying anything, just trembling all over. I put my right arm round him, hugged him gently, and turned the lorry round with my left hand and drove back to the cottage where I lived. I just couldn't go to the elevator after that.

"I left the lorry at the gate, took my new son in my arms and carried him into the house. And he got his little arms round my neck and hung on tight. He pressed his cheek to my unshaven chin and stuck there. And that's how I carried him in. My friend and his wife were both at home. I came in and winked at them with both eyes. Then, bold and cheerful, I said: 'Well, I've found my little Vanya at last. Here we are, good people.' They hadn't got any children themselves and they both wanted a kid, so they guessed what was up straightaway and started bustling around. And the kid just wouldn't let me put him down. But I managed it somehow. I washed his hands with soap and sat him down at the table. My friend's wife ladled him out a plate of soup, and when she saw how he gulped it down, she just burst into tears. She stood at the stove, crying into her apron. And my Vanya, he saw she was crying, and he ran up to her, tugged at her skirt and said: 'Why are you crying, Auntie? Daddy found me near the café. Everyone ought to be happy, and you are crying.' But she only cried all the harder.

"After dinner I took him to the barber's to have his hair cut, and at home I gave him a bath myself in a tub and wrapped him up in a clean sheet. He hugged me tight and went to sleep in my arms. I laid him gently in bed, drove off to the elevator, unloaded the grain and took the lorry back to the depot. Then I went to the shops. I bought him a pair of serge trousers, a shirt, a pair of sandals and a straw cap. Of course, it all turned out to be the wrong size and no good for quality. My friend's wife gave me a ticking-off over the trousers: 'Are you crazy,' she says, 'dressing a boy in serge trousers in heat like this!' And the next minute she had the sewing-machine on the table and was rummaging in the chest, and in an hour she had a pair of cotton shorts and a white shirt ready for my Vanya. I took him to bed with me and for the first time for many a night fell asleep peacefully. I woke up about four times in the night though. And there he was, nestling in the crook of my arm, like a sparrow under the eaves, breathing away softly. I can't find words to tell you what joy I felt. I'd try not to move, so as not to disturb him, but then I'd get up very quiet, light a match and just stand there, admiring him....

"Just before daybreak I woke. I couldn't make out why it seemed so stuffy. It was my young son. He'd climbed out of his sheet and was lying right across my chest, with his little foot on my throat. He's a rare young fidget to sleep with, he is; but I've got used to him. I miss him when he's not there. At night, I can stroke him while he's sleeping, I can smell his curls. It takes some of the pain out of my heart, makes it a bit softer. It had just about turned to stone, you know.

"At first he used to ride with me in the lorry, then I realised that that wouldn't do. After all, what do I need when I'm on my own? A hunk of bread and an onion with a pinch of salt will last a soldier the whole day. But with him it's different. Now you've got to get him some milk, now you've got to boil an egg for him, and he can't get along without something hot. But I had my work to do. So I plucked up my courage and left him in the care of my friend's wife. Well, he just cried all day, and in the evening ran away to the elevator to meet me. Waited there till late at night.

"I had a hard time with him at first. After one very tiring day we went to bed when it was still light. He used to be always chirruping like a sparrow, but this time he was very quiet. 'What are you thinking about, son?' I asked. He just looked up at the ceiling. 'What did you do with your leather coat, Daddy?' And I'd never had a leather coat in my life! I had to get round it somehow. 'Left it in Voronezh,' I told him. 'And why were you so long looking for me?' So I said: 'I looked for you, sonny, in Germany, in Poland, and all over Byelorussia, and you turned up in Uryupinsk.' 'Is Uryupinsk nearer than Germany? Is it far from our house to Poland?' We went on talking like that till we dropped off to sleep.

"But do you think there wasn't a reason for his asking about that leather coat, mate? No, there was a reason behind it all right. It meant at some time or other his real father had worn a coat like that, and he had just remembered it. A kid's memory is like summer lightning, you know; it flashes and lights things up for a bit, then dies away. And that was how his memory worked; like the flashes of summer lightning.

"We might have gone on living another year in Uryupinsk together, but in November I had an accident. I was driving along a muddy road through a village and I went into a skid. There happened to be a cow in the way and I knocked it over. Well, you know how it is—the women raised a hullabaloo, a crowd gathered, and soon there was a traffic inspector on the spot. I asked him to go easy, but he took my licence away. The cow got up, stuck its tail in the air and went galloping away down the street, but I lost my licence. I went through the winter as a joiner, and then got in touch with an old army friend—he works as a driver in your district—and he invited me to come and stay with him. You can do joinery work for a year, he says, then you can get a new licence in our region. So now my son and I, we're on the march to Kashary.

"But even if I hadn't had that accident with the cow, you know, I'd have left Uryupinsk just the same. I can't stay in one place for long. When my Vanya gets older and he's got to go to school, I expect I'll knuckle under and settle down. But for the time being we're tramping the Russian land together."

"Does he get tired?" I asked.

"Well, he doesn't go far on his own feet; most of the time he

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rides on me. I hoist him on to my shoulder and carry him. When he wants to stretch his legs, he jumps down and runs about at the side of the road, prancing around like a little goat. No, it's not, that, mate, we'd get along all right. The trouble is my heart's got a knock in it somewhere, ought to have a piston changed. Sometimes it gives me such a stab I nearly get a black-out. I'm afraid one day I may die in my sleep and frighten my little son. And that's not the only thing. Nearly every night I see the dear ones I've lost in my dreams. And mostly it's as if I was behind barbed wire and they were on the other side, at liberty. I talk about everything to Irina and the children, but as soon as I try to pull the barbed wire apart, they go away, seem to melt before my eyes. And there's another funny thing about it. In the daytime I always keep a firm grip on myself, you'll never get a sigh out of me. But sometimes I wake up at night and my pillow's wet through."

From the river came the sound of my friend's voice and the splash of oars in the water.

This stranger, who now seemed a close friend of mine, held out his big hand, firm as a block of wood.

"Good-bye, mate, good luck to you!"

"Good luck and a good journey to Kashary!"

"Thanks. Hey, sonny, let's go to the boat."

The boy ran to his side, took hold of the corner of his jacket and started off with tiny steps beside his striding father.

Two orphans, two grains of sand swept into strange parts by the tremendous hurricane of war.... What did the future hold for them? I wanted to believe that this Russian, this man of unbreakable will, would stick it out, and that the boy would grow at his father's side into a man who could endure anything, overcome any obstacle if his country called upon him to do so.

I felt sad as I watched them go. Perhaps all would have been well at our parting if Vanya, after going a few paces, had not twisted round on his stumpy legs and waved to me with his little rosy hand. And suddenly a soft but taloned paw seemed to grip my heart, and I turned hastily away. No, not only in their sleep do they weep, these elderly men whose hair turned grey in the years of war. They weep in their waking hours, too. The thing is to be able to turn away in time. The main thing is not to wound a child's heart, not to let him see the unwilling tear that burns the cheek of a man.

THE RUSSIAN CHARACTER

ALEXEI TOLSTOY

The Russian character! It is too impressive a title, of course, for a story of no great length. But there it is, it happens to be the Russian character that I want to talk about.

Yes, the Russian character—describe it, if you can! I could tell you about plenty of heroic feats, but there are so many that I should be at a loss which to choose. Luckily, however, a friend of mine has come to my rescue with a story from his own life. I shan't tell you how he fought the fascists, though he wears the Gold Star and sports a row of medals across his chest. He is a simple, quiet, ordinary man—a collective farmer from a village on the Volga in Saratov region. But he used to stand out among others because of his powerful physique and good looks. You just couldn't help staring when you saw him climb out of the turret of his tank—a veritable god of war! He would leap to the ground, pull off his helmet, freeing his thick hair, now damp with sweat, wipe his smudged face with a rag, and then—he always did it—smile with the sheer joy of being alive.

When a man's at war and constantly facing death he rises above his ordinary self. All the trashy stuff that doesn't matter peels off him, like dead skin after sunburn, and only the kernel, the real man, is left. Of course, the kernel is tougher in some men than in others, but even those with a few flaws in them are trying hard, because everyone wants to be a good and loyal comrade. But my friend, Yegor Dromov, was strict in his ways even before the war—he had enormous respect for his mother, Maria Polikarpovna, and his father, Yegor Yegorovich. "My father's a man of dignity. The first thing you feel about him is that he has self-respect. 'You'll see a lot of things in the world, son,' he says, 'and you'll go abroad, but mind you always keep your pride in being a Russian.' "

Yegor was going to marry a girl from the same village on the Volga. Our lads talk a lot about their girls and their wives, especially when it's quiet on the front line, and cold, and there's a fire in the dugout and they've had their supper. The things you hear sometimes, it's enough to make your ears curl up. Someone starts off, for instance: "What's love?" "Love arises out of respect," says one. And another'll say: "Nothing of the kind! Love's a habit. A man doesn't just love his wife, he loves his father and mother, he even loves animals." "Blow me, what a fool!" says a third. "When a man's in love, he's throbbing with it. He goes about as if he's drunk." And they keep it up like that for an hour or two till the sergeant-major chimes in with his voice of authority and goes right to the heart of the matter.

Yegor Dromov, no doubt because he was embarrassed by such discussions, only dropped me a hint about his girl. She was, he told me, a very good girl, and if she said she'd wait for him it meant she'd be there when he came, even if he came back on one leg.

Nor did he like to talk much about his battle record. "I don't like recalling such things," he would say with a frown and pull hard at his cigarette. We heard about the battle exploits of his tank from the crew. Driver Chuvilyov told a particularly impressive story.

"...We'd only just turned round and what did I see coming over the hill.... 'Comrade Lieutenant,' I shouted, 'a Tiger!' 'Step on it!' he shouts back. So off I went, weaving through the fir trees, making use of what cover there was. The Tiger groped about with its gun like a blind man, then fired and missed. But the lieutenant let him have it right in the side—what a wallop! Then he got another shot in on the turret and the Tiger toppled back with its snout in the air. And with the third shot the smoke started pouring out of every slit, and then the flames shot up about three hundred feet high. Out comes the crew through the escape hatch and Ivan Lapshin mows 'em down with his machine-gun.... Well, that cleared the road for us, and in five minutes we came tearing into the village. What a lark! The nazis went scuttling all over the place. And it was muddy, mind you, so a lot of 'em lost their boots and went hopping around in their socks, making for the barn. So Comrade Lieutenant gave me the order: 'Ram the barn!' We turned our gun round back to front and went smack into it—Cor! There were beams and bricks and planks crashing down on us, and the nazis who'd climbed into the loft. I swung round and went in again to iron the place out. The ones that were left put their hands up and yelled 'Hitler kaput!' ".

And that was how Lieutenant Yegor Dromov fought until he had a stroke of bad luck. During the Battle of Kursk, in the later stages, when the Germans were hard pressed and had begun to give way, his tank, which was stationed in a wheat field on a hill, was hit by a shell that killed two of the crew outright. The next shell set it on fire. Driver Chuvilyov, who had escaped through the front hatch, climbed back onto the turret and managed to pull out the lieutenant—he was unconscious and his clothes was burning. Chuvilyov had only just dragged him clear when an explosion ripped the tank to pieces and hurled the turret about fifty yards. He threw handfuls of loose earth on the lieutenant's head and clothes to smother the flames, then dragged him from one shell hole to another till he found a first-aid post. "Why did I do it?" Chuvilyov said afterwards. "Because I could hear his heart still beating...."

Yegor Dromov survived and didn't lose his sight, although his face was so badly burned that the bones were showing in places. He was in hospital for eight months. Plastic surgery restored his nose, lips, eyelids and ears. When the eight months were over and the bandages taken off, he looked in the glass at a face that was his, yet no longer his. The nurse who had given him the little pocket mirror turned away and cried. He gave the mirror back to her.

"I've known worse," he said. "I can get by."

But he never asked the nurse for her mirror again. Instead he would often feel his face, as though trying to get used to it. When the medical board declared him fit for non-combatant service, he went straight to his general and asked permission to return to his regiment. "But you're disabled," said the general. "No, I'm not. I'm disfigured, but that doesn't matter. I'll soon be able to fight as well as I ever did." (Yegor noticed that the general tried to avoid looking at him during the interview, and this brought a grim smile to the blue slit that was his mouth.) He was granted twenty days' leave to complete his convalescence and went home to see his father and mother. That was last March.

He had expected to get a cart at the station but had to walk the ten miles to his village. The ground was still covered with snow. It was damp and deserted everywhere. The biting wind kept dragging open the flaps of his greatcoat and howling loneliness in his ears. It was growing dark by the time he reached the village. Yes, there was the well with the long well-sweep creaking to and fro in the wind. The sixth cottage down the street was his father's house. Suddenly he halted, pushed his hands into his pockets and shook his head. Instead of going up to the front door, he cut across the patch of ground round the house and, sinking kneedeep in the snow, crouched by the low window and looked in at his mother. By the dim light of an oil lamp she was laying the table for supper. She still wore the same dark shawl on her head, still looked as quiet, unhurried and kind, but she had grown older, and her shoulders were very thin. If only I'd known, he thought, I'd have written every day, even if it was only a few words. She prepared her simple meal—a bowl of milk, a piece of bread, two spoons and a salt-cellar—and then, standing at the table with her thin arms folded under her breast, she seemed to become lost in thought. As he watched his mother through the window, Yegor Dromov realised that he couldn't possibly give her such a fright, that he mustn't let her poor little face crumple in despair.

Very well then! He opened the gate, stepped into the yard and knocked at the door. He heard his mother's voice ask from inside who was there. "Lieutenant Gromov, Hero of the Soviet Union," he replied.

His heart was thumping so violently that he had to lean against the door-post. No, his mother hadn't recognised his voice. He himself felt as if he was hearing it for the first time, it had changed so much after all his operations. It was thick and hoarse.

"What do you want, son?" she asked.

"I've brought you greetings, Maria Polikarpovna, from your son, Senior Lieutenant Dromov."

Then she opened the door, rushed out and grabbed his hands.

"Is he really alive, my Yegor? Is he well? Come inside, dear, come inside."

Yegor Dromov sat down on the bench at the table in the very place where he had sat in the days before his legs were long enough to touch the floor, when his mother would sometimes stroke his curly head and say: "Eat up, my little swallow." He started telling her about her son, about himself. He told her in detail what he ate and drank, how well and happy he was, and free of hardship, and only briefly did he mention his tank battles.

"But tell me, isn't war frightening?" she interrupted, staring into his face with eyes that were focussed elsewhere.

"Yes, mother, of course, it is," he replied, "but you get used to it."

Yegor Yegorovich, his father, came in. He had also aged; his beard looked as if it had been sprinkled with flour. He eyed the guest, kicked the snow off his battered felt boots against the doorstep, slowly unwound his scarf, took off his overcoat, and walked over to the table and shook hands—ah, how well Yegor knew that broad, just hand of his father's! Asking no questions, because it was quite clear without that why this man with a row of medals was here, he sat down and also began to listen, with half-closed eyes.

The longer Lieutenant Dromov sat there unrecognised and talked about himself as though he were someone else, the more impossible it became to throw off the pretence, to stand up and say: "Can't you recognise me, father and mother, disfigured though I am!" At his parents' table he felt both happy and hurt.

"Well, mother, let's have supper. Bring us something for our guest." Yegor Yegorovich opened the door of the little dresser. Yes, the matchbox full of fishhooks was still there, and so was the teapot with its chipped spout and the dresser still smelled of bread crumbs and onion peel. Yegor Yegorovich took out a small decanter of vodka—only enough for two glasses—and sighed because he wouldn't be able to get any more. They sat down to supper, as they had in years gone by. And only after a while did Lieutenant Dromov notice that his mother was following every movement of the hand in which he held his spoon. He gave a short laugh; his mother raised her eyes, and her face quivered with pain.

They talked of one thing and another, of what the spring would be like and whether the farmers would manage the sowing in time, and Yegor Yegorovich said that they might expect to see the end of the war this summer

"Why do you think the war may end this summer, Yegor Yegorovich?"

"The people have got their dander up," Yegor Yegorovich replied. "They've been through death itself. There'll be no stopping them now. The fascists are finished."

Maria Polikarpovna asked: "You haven't told us when hey'll give him leave to come home and see us. We haven't een him for three years. I expect he's got much bigger and has rown a moustache. And being near to death every day, like e is, I dare say his voice has got harsher."

"Yes, when he comes back you mayn't even recognise him," aid the lieutenant.

They made up his bed on the ledge over the stove, where he emembered every brick, every chink in the log wall, every kn[illegible] in the ceiling. It all smelt of sheepskin and bread, of that homely comfort that a man never forgets, even in the hour of death. The March wind whistled and murmured under the eaves. Behind the wooden partition his father snored gently. But his mother sighed and stirred restlessly on her bed; she was not asleep. The lieutenant lay still with his face in his hands. How can it be that she didn't recognise me, he was thinking.

In the morning he was wakened by the crackle of burning wood; his mother was quietly tending the stove. His footcloths, which she had washed, were hanging on a rope stretched from wall to wall. His boots had been cleaned and were standing by he door.

"Do you like millet pancakes?" she asked him.

He didn't answer at once. He climbed down from the stove, put on his tunic and belted it, and sat down on the bench barefooted.

"Does a Katya Malysheva live in your village? Andrei Malyshev's daughter?"

"She finished her course last year, she's our village schoolteacher. Do you want to see her?"

"Your son asked me to make sure I passed on his regards."

His mother sent the neighbours' daughter for her. Before the lieutenant had time to pull on his boots, Katya Malysheva was there. Her wide grey eyes were shining, her brows raised in wonder and her cheeks flushed with joy. The lieutenant almost groaned when she threw back her shawl onto her broad shoulders. If only he could kiss that warm, light hair! This was just how he had pictured her. Fresh, tender, merry, kind, beautiful—so beautiful that the whole cottage seemed to glow like gold when she entered it.

"Have you brought greetings from Yegor?" (He was standing with his back to the light and he merely nodded because he couldn't speak.) "Tell him I'm waiting for him day and night."

She came closer. Her eyes met his and she fell back a pace, as though something had struck her in the chest; she was frightened. That made up his mind—he wouldn't stay a day longer.

His mother made some millet pancakes with baked milk. He talked again about Lieutenant Dromov, this time about his deeds of valour. He spoke harshly, without looking up at Katya, so that he shouldn't see in her sweet face the reflection of his disfigurement. Yegor Yegorovich wanted to go and ask for one of the collective farm's horses, but the lieutenant went off to the station on foot, as he had come. He was so overwhelmed by what had happened that he kept stopping and pressing his hands to his face, muttering hoarsely to himself: "What shall I do now?"

He returned to his regiment, which had been brought back to the rear for reinforcement. And there he got such a welcome from his friends that it shifted the load off his heart, which had kept him from eating and sleeping. He decided that his mother needn't know about his misfortune for some time yet. And as for Katya—he would tear that thorn out of his heart.

About two weeks later he received a letter from his mother:

"My darling son! I am afraid to write to you, for I hardly know what to think. We've had a visit from a man who said he came from you. He was a very good man but his face was badly disfigured. He was going to stay with us for a while but he changed his mind and left suddenly. And ever since, my son, I haven't been able to sleep a wink, because it seems to me that man was you. Yegor Yegorovich scolds me, 'You must be out of your mind, old woman,' he says. 'If it had been our son, do you think he wouldn't have told us? Why should he pretend if it was he? A man should be proud to have such a face as he had.' Yegor Yegorovich tries to talk me round, but my mother's heart knows otherwise—it was he, it was he, it tells me. That man slept on our stove and I took his greatcoat out in the yard to clean it, and I held it to my breast and wept because I knew it was you. Dear Yegor, please, for the love of Christ, write to me, tell me what happened. Or perhaps I have really gone out of my mind."

Well, Yegor Dromov showed this letter to me, Ivan Sudarev, and, as he told me his story, he wiped his eyes on his sleeve. I said to him: "That's a clash of character for you! You're a fool, man, you're a fool. Write to your mother and ask her forgiveness. Don't drive her mad. A lot she cares about your appearance! She'll love you even more as you are now."

He wrote a letter the same day. "My dear parents, Maria Polikarpovna and Yegor Yegorovich, forgive me for my foolishness. It really was me, your son, who came to see you...." And so on and so forth, for another four pages, in small handwriting. He'd have written twenty, if he had had the time.

Some time later we were on the proving ground together, when a soldier came running up. "Someone wants to see you, Captain Dromov," he said. Though he was standing stiffly at attention, the soldier looked as if someone was just about to treat him to a drink. We went down to the hut where Dromov and I were living. I could see he was uneasy—he kept coughing and clearing his throat. He may be a tank soldier, I thought, but he's got nerves. He went into the hut ahead of me and I heard his voice:

"Hullo, mother, it's me." I saw a little old woman clinging to his chest. When I looked round I noticed there was another woman in the room. Well, there must be other beautiful women about, she's not the only one, I'm sure, but I've never seen another like her.

He freed himself from his mother's embraces and turned to this girl. As I said before, his magnificent physique made him look like a god of war. "Katya!" he said. "Why did you come? You promised to wait for another man, not this—"

And before I went out into the porch, I heard her say: "Yegor, I'm going to live with you for ever and ever. I will love you truly, with all my heart. Don't send me away."

Yes, that's the Russian character! A man may seem ordinary enough, but when trouble comes, he is endowed with a mighty strength—the beauty of the human heart.

Activity 5: Economics and Budget Priorities

Economics is the science that deals with the production, distribution, and consumption of commodities -- anything useful or that can be turned to commercial or other advantage. Economics has been around as long as civilization. People have always been concerned with policies and decisions on how their money is spent by people making the decisions.

Capitalism, socialism, and communism are all complex social forms that govern the people and spend money differently. These forms make statements about the process of how people's needs should be met in a society.

Over the centuries, countries have sought many essential resources for its people -- food, water, minerals, raw materials for manufacturing, territory, and energy. Wars have been fought between nations seeking to increase their own resources, power and prestige and to preserve their ideals and beliefs.

The uses to which government budgets are put are statements of the national will. In a sense, the national budget sums up the priorities of the nation. It also affects the kind of life each of us, especially the poorest and weakest among us, will have a chance to live.

Exercise: Listed below are six categories. The task of your group is to decide how much money to spend in each category. Your twenty tokens represent all of the money in the national budget. Distribute the twenty tokens among the six categories. Once you have made your decisions, write down the number of tokens you have given to each category.

Remember that the tokens assigned to each category represent your statement about what you think is important for our country to spend its money on.

CATEGORY	# OF TOKENS
1. Social needs (education, food & nutrition, job training, social services)	
2. Social security, retirement, & unemployment	
3. National defense (military)	
4. Physical needs (national resources & environment, transportation, housing, community development)	
5. Health (medical research, medical programs for the elderly, handicapped & poor)	
6. Science and politics (energy, science, agriculture, international affairs)	

Connections:

Divide the class into groups of five to seven, and hand out blank budget sheets to all students and 20 tokens (or pennies or poker chips) to each group. Tell students the budge sheet lists the various areas in which the federal budget money is spent. Each group has to decide how many tokens should be spent for each category. After they have decided how many tokens belong in each category, write their numbers on the board and take the average.

I

- How did students decide what was important?

- How much did they consider the range of people in America?

- This might be a good time to discuss the notion of "the common good." How is it decided? Who decides?

- How does each category affect the others? Which categories, if left without enough tokens, would represent the greatest amount of human suffering? Is human suffering considered important in deciding priorities?

- Discuss the categories. How are they similar or different? Should there be other categories?

II

(Reagan's proposed 1987 budget allocations: 1-1, 2-7, 3-8, 4-1, 5-2, 6-1)

Write down Reagan's proposed 1987 budget allocations next to the class average.

- Are the figures similar? If not, how are they different?

- If they are different, what might students do to interact with decision-makers about budget priorities?

Some teachers feel it is important to include specific information about U.S. government spending in this lesson. The following reading states a position about wasteful military spending and raises questions that must confront us all:

Today, we are at a unique point in history. To preserve their own interests, both the United States and the Soviet Union now possess weapons that can destroy the world's population many times over. To reach this point, economic decisions had to be made by both governments to build such weapons. Decisions and policies have been set to strengthen our military capability beyond what is needed for simple defense. Where is the money coming from that keeps the arms race going?

Military expansion has restricted both the economic and income (or revenue shares) available to meet other needs of a rapidly growing population. An average of one out of every seven dollars now goes to the military rather than to productive civilian use. In a world in which millions of people are starving and lack the barest shelter, military defense draws twice as much budget support as food-growing and five times as much as housing. Consider these facts:

- -The world spends 2,300 times more for military activities than for international peace-keeping;
- -The U.S. military build-up over the next five years will cost $1.7 trillion and will cost the average U.S. family over $20,000 in income taxes;
- -The U.S. is experiencing the highest unemployment rate since 1941;
- -In 1982, $39 billion in social programs in the U.S. were cut, while military spending increased by $30 billion;
- -The U.S. has a stockpile of nuclear weapons amounting to 30,000 bombs. Together, the U.S. and the Soviet Union have accumulated 50,000 bombs with a total destructive force of about a million Hiroshimas -- 6,000 pounds of TNT for every person on earth;
- -President Reagan's plans call for 17,000 more nuclear weapons within the next ten years.

Sources for the Economics and Budget Priorities lesson:

Ruth Leger Sivard, World Military and Social Expenditures, (World Priorities, 1981).

"Choices: A unit on conflict and nuclear war," a junior high school curriculum prepared by the Union of Concerned Scientists, NEA, and the MTA (March 1983).

John Kenneth Galbraith, "Economics and the Arms Race," Boston Review, August 1982.

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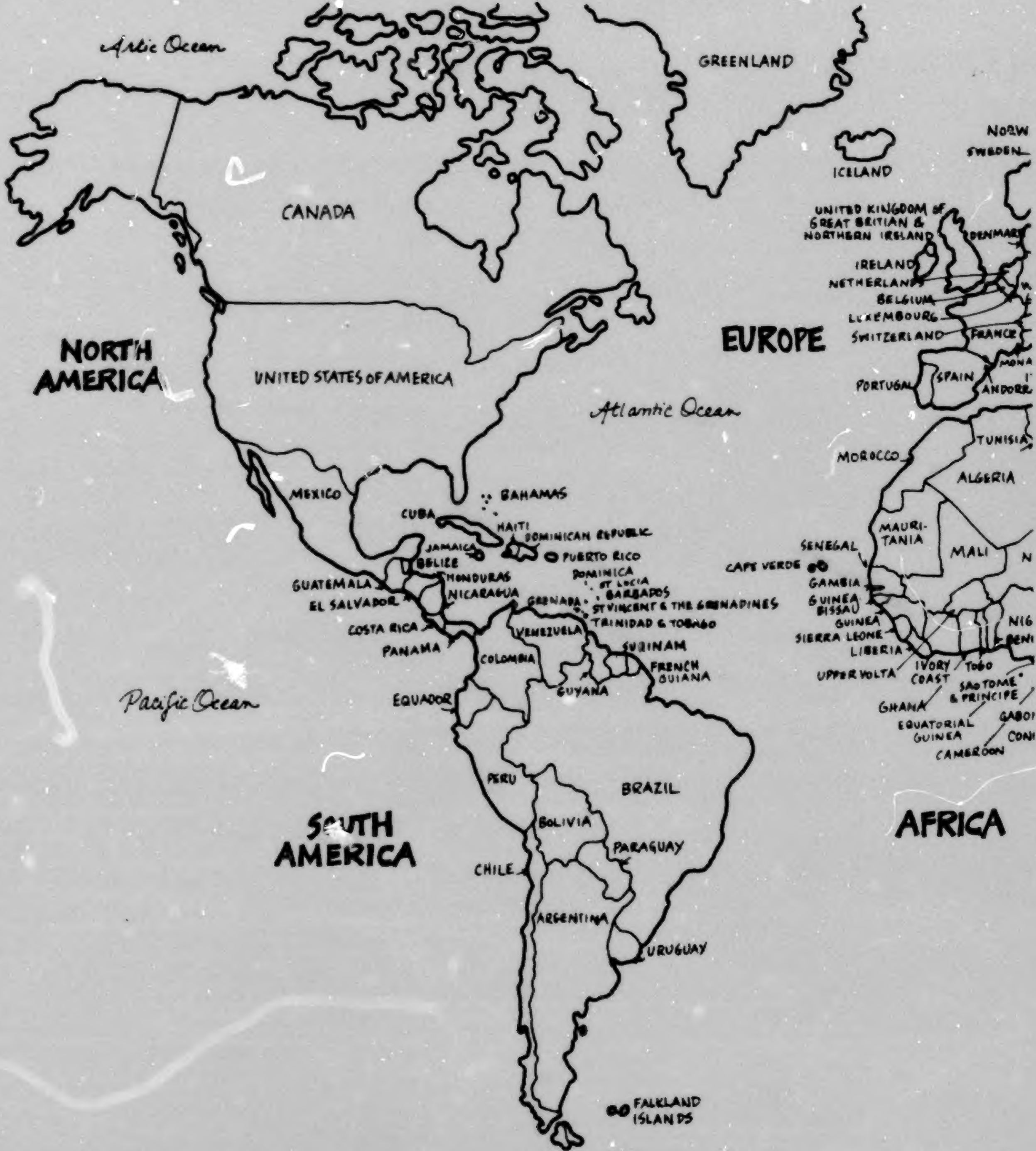
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ICELAND
NORW
SWEDEN
UNITED KINGDOM OF GREAT BRITIAN & NORTHERN IRELAND
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LUXEMBOURG
SWITZERLAND
FRANCE
MONA
PORTUGAL
SPAIN
ANDORRA
NORTH AMERICA
UNITED STATES OF AMERICA
EUROPE
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MOROCCO
ALGERIA
MEXICO
BAHAMAS
CUBA
HAITI
DOMINICAN REPUBLIC
JAMAICA
PUERTO RICO
BELIZE
MAURITANIA
SENEGAL
MALI
CAPE VERDE
GAMBIA
GUINEA BISSAU
GUINEA
SIERRA LEONE
LIBERIA
UPPER VOLTA
IVORY COAST
TOGO
GHANA
SAO TOME & PRINCIPE
EQUATORIAL GUINEA
CAMEROON
GABO
CON
NIG
BENI
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EL SALVADOR
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PANAMA
DOMINICA
ST LUCIA
BARBADOS
GRENADA
ST VINCENT & THE GRENADINES
TRINIDAD & TOBAGO
VENEZUELA
COLOMBIA
SURINAM
FRENCH GUIANA
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FALKLAND ISLANDS

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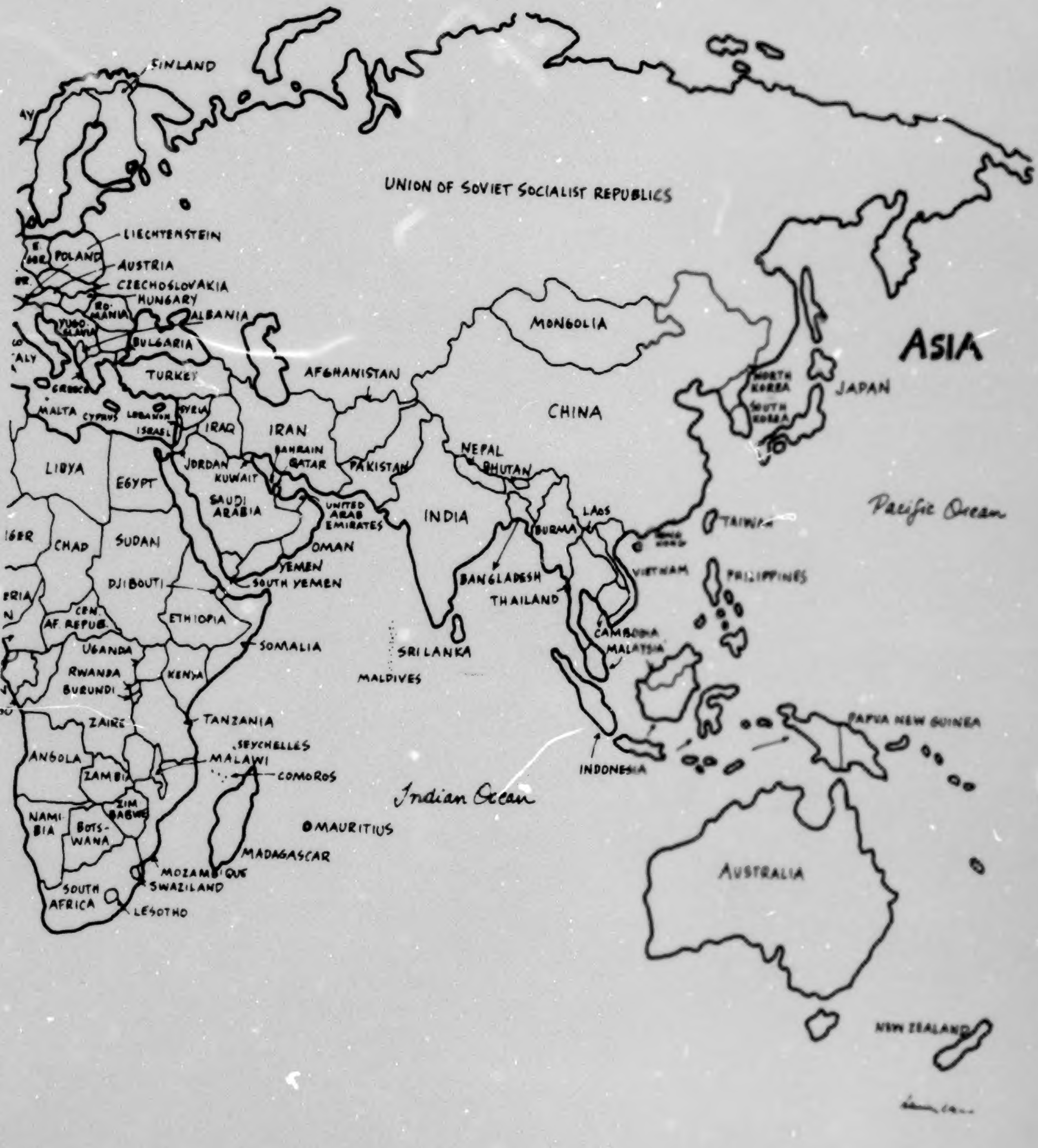
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BURMA
THAILAND
CAMBODIA
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INDIA
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BAHRAIN
QATAR
KUWAIT
JORDAN
SAUDI ARABIA
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SOUTH YEMEN
LIBYA
EGYPT
CHAD
SUDAN
DJIBOUTI
ETHIOPIA
SOMALIA
CEN. AF. REPUB.
UGANDA
KENYA
RWANDA
BURUNDI
ZAIRE
TANZANIA
SEYCHELLES
MALAWI
COMOROS
ANGOLA
ZAMBIA
ZIMBABWE
NAMIBIA
BOTSWANA
MOZAMBIQUE
SWAZILAND
SOUTH AFRICA
LESOTHO
MADAGASCAR
MAURITIUS
SRI LANKA
MALDIVES
Indian Ocean
INDONESIA
PAPUA NEW GUINEA
AUSTRALIA
NEW ZEALAND

Activity 6: "Who's Got the Bomb?"

Nearly everyone knows that the United States and the Soviet Union have large numbers of nuclear weapons. This dates back to the 1940s and World War II. Since that time, many more countries now possess nuclear weapons and many countries are either capable of building them or plan to do so. Today between 6 and 10 nations are considered nuclear weapons states (NWS) and it is predicted that by the year 2000, between 30 and 40 nations will possess nuclear weapons.

Nations Possessing Nuclear Arms

USA
USSR
France
Great Britain
China
India

Nations Capable of Building a Nuclear Weapon

Canada
Sweden
Switzerland
Israel
Pakistan
S. Africa
W. Germany
Japan
Iran
Italy

Nations That Could Possess Nuclear Arms by 1990

Australia
Finland
Norway
Libya
Nigeria
Yugoslavia
Austria
Belgium
Egypt
Indonesia
Denmark
Syria
Algeria
Argentina
Holland
Spain
S. Korea
Taiwan
Zaier
Iraq
Brazil

Exercise:

1. Brainstorm a list on the board of the reasons you think nations want nuclear weapons.

2. Take a copy of the world map and three colored pencils or crayons (you can also "shade" or "stripe" with your pen or pencil). Draw a key for the three categories of nations and color in the map.

3. Read the three statements below. These represent different views on the issue of proliferation or the spread of nuclear weapons. After you have read the statements, put an X on the proliferation line where you belong in the debate.

A. Nuclear weapons must be stopped at all costs. They only make nuclear war more likely. Having nuclear weapons doesn't increase the wealth of a country; in fact, it decreases it. Building nuclear weapons drains the economy of jobs and social programs. Look at China, India, and England -- they have nuclear weapons and are no richer for it. West Germany, Japan, and Canada don't have nuclear weapons and have fewer economic problems. Nuclear weapons are expensive -- why not give the money to poor countries that don't have enough food. Having nuclear weapons only makes it more likely that some terrorists will get them and the world will blow up by accident. There has never been a weapon made that wasn't used. It's in everyone's self interest not to build nuclear weapons. We should put our resources into social programs, people's lives, and peace.

B. We should keep the nuclear weapons in the countries they are. The superpowers know what they are doing. It's been nearly thirty years with nuclear weapons and no nuclear war has broken out. Let's put our energies into treaties and talks, such as SALT and START, which will limit the spread of nuclear weapons and keep them safe in the nations possessing them. The world is not more dangerous today than before. Why shouldn't the agreements between the Soviet Union and the U.S. continue to work? Technology is the greatest advancement in the world today -- why go back to the dark ages and rid the world of one of our greatest achievements? If we stop building weapons, millions of jobs will be lost.

C. Why should only two countries control nuclear weapons? This "duopoly" only continues the hierarchical nature of world politics. Every country, big or small, should build nuclear weapons; then we're all on the same footing. If poor, Southern countries don't build nuclear weapons, then they'll remain poor forever. Having nuclear weapons makes a country strong and discourages larger, more powerful countries from invading and making the country even poorer. Deterrence has worked and will continue to work. You can't stop building nuclear weapons on a theory that has never been proven. States with nuclear weapons can improve their security, maximize their interests, and equalize power relationships. It's the smaller countries that need the electricity provided by nuclear power plants -- rich countries already have energy. That's why we'll continue to not sign the NPT (Non-Proliferation Treaty) because we want a share of the world's wealth, power, influence. Rich countries are always trying to help poor countries, with aid money and food. If we could generate electricity, we could make more of our own food and be out from under the control of Northern countries.

A.	B.	C.
Must stop	Keep as is	Continue
building nuclear weapons	and work on strengthening existing treaties & security measures	to build weapons at a rapid rate for equality of the world

4. Discussion questions:

a. Define security.

b. What is world security?

c. Will the possession of nuclear weapons lead to greater security?

d. Will greater equality lead to nuclear safety?

e. Will increased proliferation decrease the nonegalitarian nature of world politics?

f. Who is responsible for the spread of nuclear weapons?

g. Who should decide whether a country possesses nuclear weapons?

h. Can equality exist in a dangerous world?

Connections:

Add to the list of the students' ideas on the board the following: prestige, power, natural resources, water, food, defense, territory, ethnic or religious autonomy, military strategic regions, cheap labor forces.

Ask students what observations they have after they color their maps.

This exercise can be done individually or in groups of 5 to 7 and discussed with the class.

Sources for this lesson:

"Crossroads: Quality of Life in a Nuclear World," a high school social studies curriculum, Jobs with Peace, 77 Summer Street, Boston, MA 02110 ($4).

The Disarmament Catalogue, edited by Murray Polner (New York: Pilgrim Press, 1982).

Map by Bonnie Acker

Activity 7: Chemical and Biological Warfare

In April, 1915, one of the first known large-scale uses of chemical weapons occurred in Belgium at Ypres (e pray'). It was the Germans who released hundreds of thousands of pounds of chlorine gas from pressurized canisters against Allied troops. Winds carried the gas to nearby Canadian and French lines and the troops inhaled the deadly gas and were asphyxiated -- they couldn't breathe. It is hard to estimate how many died, but one death toll was put at 5,000 dead and 10,000 unable to function. The battle at Ypres marks a major escalation in the chemical arms race.

What are chemical weapons? How do they work? Most are "tasteless, colorless, odorless chemicals lethal in drops the size of the period at the end of this sentence." Most chemical weapons work by blocking a vital enzyme in the body so large quantities of a substance called acetylcholine build up. This natural body substance in high amounts causes intense sweating, coughing, and loss of vision. Higher doses cause uncontrollable vomiting and convulsions. Chemical weapons are inexpensive, easy to use, and very effective. The one used by the Germans at Ypres was a type of blister or mustard gas: others which are being stockpiled in the U.S. at present are GB, VX[1], H, HD, and HT.

The entire world was horrified at the widespread killing at Ypres in 1915. In 1922 and 1925, international agreements (the Geneva Protocol) were signed which banned the use of chemical weapons. In the 1930s, the Germans developed the first nerve gas to be used as an insecticide. Although no chemical weapons were used during World War II, interest by many nations has been high, and both the U.S. and the Soviet Union are researching, developing, and stockpiling huge quantities of chemical weapons "just in case." Both the U.S. and Great Britain are trying to convince NATO[2] that chemical weapons are necessary against Soviet buildup.

In the Alabama foothills stands the U.S. Army Chemical School, a 46,000 acre site of the U.S. Army's chemical warfare. In the 1960s, people at the school tested a toxic nerve gas in Utah and killed more than 6,000 sheep. At about the same time, the public became aware of the "CHASE" method of disposing of chemical weapons -- "cut holes and sink 'em." Look at the map and the places where there are dumps of chemical weapon canisters filled with toxic chemicals.

In 1973, the U.S. Army Chemical School was closed down, and in 1974, the U.S. and the Soviet Union announced plans to negotiate complete chemical disarmament including a ban on the use of chemical weapons. Five years later, the school in Alabama started up again. In 1981, President Reagan asked Congress for $20 million for a binary nerve gas factory in Pine Bluffs, Arkansas. His request was denied initially by the National Security Council, but then later approved. This buildup in chemical weapons represents a reversal in position of the past three administrations. Today the U.S. Army has 300,000 tons of gas, two-thirds of which is nerve gas. The U.S. also has a two-week supply in West Germany and more supplies in the Pacific, France, and the United Kingdom. The U.K. has also developed lightweight protective clothing to be worn during chemical warfare, which is being tested during drills.

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[1] VX is the grand-daddy of nerve gas, developed in 1958.

[2] North Atlantic Treat Organization; see section on NATO.

Many people think that the next war will be an "NBC" war -- nuclear, biological, and chemical.

What are biological weapons? Biological weapons are used in what is known as "germ warfare." Microorganisms, such as bacteria, or their spores, are used in large quantities in a spray over a population. People inhale or ingest the microbes and become very sick and sometimes die.

In 1979, there was a major disaster in Sverdlovsk in the Soviet Union. The organism released caused the disease anthrax, an acute infectious disease caused by the bacteria Bacillus anthracis which attacks cattle, sheep, horses and goats. Anthrax spores were carried by the winds over the population in Sverdlovsk and more than 1,000 died immediately. Between 30 and 40 died every day for the following month. The person develops a fever, cough, edema (swelling), cyanosis (blue coloration).

The incident at Sverdlovsk has just recently been reported. Neither the Soviet Union nor the U.S. are absolutely certain about biological warfare stockpiles of the other. In 1972, there was a treaty banning biological weapons and an agreement to dismantle stockpiles on both sides. Since that time, there are suspicions on both sides that the other has been using biological weapons, but it is hard to know.

Consider the following questions:

1. What do you think about chemical weapons?

2. Why do you think the Soviet Union and the U.S. are interested in banning chemical and biological weapons?

3. How do you feel chemical weapons compare to conventional and nuclear weapons? Are there ways they seem more humane? More cruel?

4. Why do you think it is so difficult to tell if a country is stockpiling biological weapons? How might this affect any treaties?

Sources for this lesson:

David H. Morrissey, "The Return of Chemical Warfare," The Progressive, February 1982, pp. 25-28.

Peter Hall, "Nerve Gas Politics," The Progressive, September 1980, pp. 42-44.

S. J. Luodin, "Chemical Weapons: Too Late for Disarmament?" The Bulletin of Atomic Scientists, December 1979.

Activity 8: Lasers

Laser is an acronym for "light amplification by stimulated emission of radiation." A laser is a complex, fragile, and expensive device which generates an intense stream of electromagnetic waves. These waves all have very nearly the same frequency, phase, and direction of motion and are said to be coherent. Lasers were developed in 1958 and have had wide use in industry and medicine. Lasers are used to pierce metal as well as to perform delicate eye surgery. Lasers are used in oil drilling, surveying, tunnel digging, and earthquake or seismic detection.

Some people in the U.S. Congress, the Department of Defense, and the aerospace industry have been promoting research and development of lasers as weapons. The U.S. government is spending about $300 million a year on its laser weapons program. The main objective is to deploy a network of very large laser weapons in the earth's orbit within the next ten years. These orbiting weapons would have the mission to destroy Soviet intercontinental ballistic missiles (ICBMs) soon after launching. Another objective is to develop laser weapons that would be fired from the ground to attack enemy satellites or to defend valuable targets against aircraft and missiles. Lasers have been used in battlefield warfare for twenty years, primarily as anti-tank weapons.

A laser is different from other weapons for three reasons: (1) it transports destructive energy in the form of electromagnetic waves rather than in the form of an explosive charge carried in a missile or shell; (2) the energy of a laser moves with the speed of light (300,000 meters per second); a supersonic missile can reach a speed of 1,000-2,000 meters per second; and (3) the laser beam has to strike the object in order to destroy it.

Lasers do their damage by overheating the target, even though only a small percent of energy fired is absorbed by the target. The energy is so intense that a laser beam can melt a hole in metal. Lasers can be pulsed, or fired rapidly, but need to be cooled down between firings (pulses). This requires an enormous energy source. It is estimated that about ten pulses would be needed to punch a hole in a Soviet ICBM. This may not sound like much until you realize that one million megawatts of power would be needed during the laser beam pulses. Compare this to a commercial power plant which has a generating capacity of a little more than 1,000 megawatts.

In order to operate, a laser requires huge mirrors. A laser system also needs sensors to identify and determine the location of the target with accuracy. Control devices are needed to coordinate the mirrors and the sensors. An additional system is needed to assess the damage done or the distance the target has moved so the laser system can strike again. Finally, a means of generating and storing energy is required to power the laser system.

If one million megawatts of power need to be generated to hit the Soviet ICBM, then a mirror four meters across would need to be built for an accurate aim. Some people doubt that such a large mirror of sufficiently high optical quality and ruggedness can ever be made. The energy system required to fuel the laser to deliver the ten pulses would have to be equivalent to twenty times the fuel used in the U.S. space shuttle.

The efficiency of a laser system operating in the atmosphere depends on the weather. Such dependence is a serious drawback for any weapon. Cloudy weather, fog, or dust can interfere with the laser beam. Even on a clear day, the laser beams are deflected, dispersed, and disrupted by the atmosphere.

A laser beam itself fractures air molecules and these interfere with laser beam efficiency. Broken and charged particles will, in turn, absorb the laser beam. Even on a perfectly clear day, with minimal atmospheric interference, only a small percentage of the laser beam energy is absorbed by the target.

Exercise: Indicate whether you AGREE or DISAGREE with the following statements. Choose one to discuss in depth.

1. The U.S. and the Soviet Union should fight its wars in space and leave the earth alone.

2. The U.S. and the Soviet Union should open talks to ban the building of space weapons.

3. Lasers and other radiation weapons will eventually replace today's nuclear weapons.

4. Video games, using simulated laser beams, are preparing people for space warfare.

5. Laser systems are useful to society and their research and development should be continued.

Source for this lesson:

Kosta Tsipis, "Laser weapons," Scientific American, December 1981, pp. 51-57.

Activity 9: Star Wars

The Space Age was launched on October 4, 1957 when Sputnik left the earth's atmosphere. "Sputnik" means fellow traveler and was the first artificial satellite to travel around the earth. Since the time Sputnik was launched by the Soviets, the interplanetary space beyond the earth's atmosphere has remained a peaceful environment, open to all nations for exploration. Many countries other than the U.S.A. and the Soviet Union have launched vehicles into space: France, Japan, China, and Great Britain have sent up satellites; West Germany and possibly India are preparing to do so.

Approximately 11,000 objects, detectable by radar, have been put into space. Nearly two-thirds have decayed from orbit and there have only been a handful of known cases of debris reaching the earth's surface. Besides the problem of garbage in space, concern is increasing for traffic control in space as more countries launch satellites.

Satellites perform many important functions for countries. Satellites are used for navigation and charting the heavens, as well as for communications across vast distances, and weather-forecasting. Satellites can also be used to survey activities going on in other countries, from earthquakes to building nuclear weapons.

Some regard space technology as an essential contribution to the stabilization of the arms race. Countries now possess nuclear weapons with unimaginable destructive capabilities and space technology permits surveillance which many people believe has had a positive impact upon peace and security. Can we assume this will continue into the future?

Within the past few years, the world has entered a new kind of space age. Satellites are now "the eyes, ears and nervous system of a nuclear superpower." As advanced space systems are developed, others feel that such systems make nuclear war more likely. Land-based missiles are considered vulnerable to satellite weapons, and this may create a "use-it-or-lose-it" attitude. What if a peaceful satellite malfunctions and is interpreted as hostile?

Other problems with space technology exist. The cost of more sophisticated systems is high. As more countries enter the "space race," money is being channeled into space exploration which has to come from somewhere.

Space clutter may become a problem. There is a region of space called the geostationary orbit, or GSO, that is actually becoming crowded with debris and radio signals. The GSO is that altitude above the equator at which satellites appear to be fixed in place above a spot on earth. The GSO enables continued relay of a signal from a point on earth to the satellites and back to a wider area on earth. Physical crowding of the GSO with space vehicles and parts of vehicles is not a serious problem, but could become one if ignored. Since more and more countries are broadcasting from outer space, radio signal frequencies may share too little space.

Another problem is the use of nuclear power as an energy source for satellites in space. The use of nuclear power is as controversial in space as it is on earth. The primary concern centers on problems created when and if these craft return to earth. In 1978 the Soviet satellite Cosmos 954 re-entered the atmosphere over Canada by mistake, carrying a potentially dangerous nuclear reactor. It may release radioactivity when it hits the ground.

One of the most grave concerns is the "weaponization" of space: "this includes the placement of kill mechanisms in space or the practice of hostilities beyond the earth's atmosphere." This may happen as the nuclear superpowers develop devices such as anti-satellite weapons, particle beams, and lasers, spending more money on military space efforts than on civilian programs.

Countries, including the Soviet Union and the U.S.A., are aware of such problems. One of the first agreements made between the two countries was Resolution 1962, which was actually adopted in 1963. This called on all nations "to refrain from introducing weapons of mass destruction into outer space." The Outer Space Treaty of 1967 strengthened Resolution 1962 by "forbidding any country from placing weapons of mass destruction in space and limiting the use of the moon and other celestial bodies exclusively for peaceful purposes." The moon treaty, written in 1979, has not been ratified. Most countries agree on most issues relating to a treaty that provides a country to explore the moon only for peaceful purposes. The unresolved section of the moon treaty deals with the natural resources of the moon. The raw materials of the moon contain the same elements as those on earth. Most countries regard the moon as a platform for unmanned radio towers or astronomy facilities.

Meanwhile, arms control agreements dealing with earth warfare, such as land-based or sea-based missiles, have added provisions dealing with space warfare. In 1969, the U.S. and the Soviet Union promised not to interfere with each other's reconnaisance or inspection satellites. Until now, both countries have held to their promise, but technologies have advanced since that time and no more discussion has been held since 1979. Not only is there suspicion of satellite weapons being developed, but anti-satellite devices (ASATs) are also being developed to intercept the satellite weapons.

At this point, there is no single outer space agency to monitor everything going on. Many organizations within the United Nations (UN) now manage and coordinate meetings, conferences, treaties, and other affairs regarding outer space. The UN has been the association to receive reports from nations of their launchings. Many feel that the technologies are advancing faster than the ability to control them. Few argue that outer space is to be used for the benefit of humankind in the interests of peace and international cooperation.

Exercise: Brainstorm uses for satellites.

Connections:

Below is a list of satellite uses to add to the students' list.

ALREADY IN USE:

- radio
- TV
- tele-communications
- intelligence (obtaining information about activities in other countries, using photos)
- earthquake prediction
- space shuttle
- space exploration
- monitoring pollution of air and sea
- climatology
- reusable space shuttles
- map making
- meteorology (weather forecasting)
- early warning against nuclear attack
- reconnaisance
- surveillance
- navigation
- discovering new resources such as minerals, agricultural potential
- verification of treaties observance

BEING DEVELOPED:

- solar power stations
- laser space stations
- permanent space labs
- anti-satellite weapons (ASATs)
- space manufacturing (e.g., ball bearings)

Activity 10:

Read the following statements and discuss your reactions:

A. "The research programs of the U.S. and the Soviet Union are propelling the world closer and closer to the realization of space warfare emulating the computerized electronic games which are such a rage today."

B. "Although technology is still important, economic, social and political issues will dominate outer space activities in the next decade."

Sources for this lesson:

Herbert Scoville & Kosta Tsipis, "Can space remain a peaceful environment?" Occasional Paper 18, The Stanley Foundation (ISSN 0145-8841).

"Maintaining Peace in Outer Space," 17th conference on the U.N. of the Next Decade, Cooperstown, N.Y., June 1982, The Stanley Foundation (ISSN 0069-8733).

"Cooperation or Confrontation in Outer Space?" 13th conference on the U.N. of the Next Decade, Iowa City, IO, July 1978, The Stanley Foundation (ISSN 0069-8733).

Alan B. Sherr, "Satellite Warfare," New York Times, August 27, 1982.

The Bulletin of Atomic Scientists, September 1979.

Activity 11: Civil Defense

One issue raised in dealing with nuclear war is the usefulness of civil defense preparation.

Connections:

Each town has its own civil defense plan. Teachers should get a copy from the local civil defense agency and examine it with students. What kind of attack is being considered? How much warning is provided? What is the predicted level of destruction? Where are the shelters, etc.? How large a volunteer cooperative level is expected? Does the plan seem feasible?

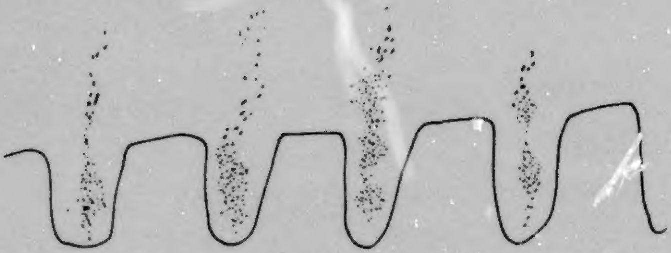
Another possible project is to study the Federal Emergency Management Agency's plans to present curriculum in schools supporting the use of civil defense shelters in case of nuclear war.

CHAPTER IX:

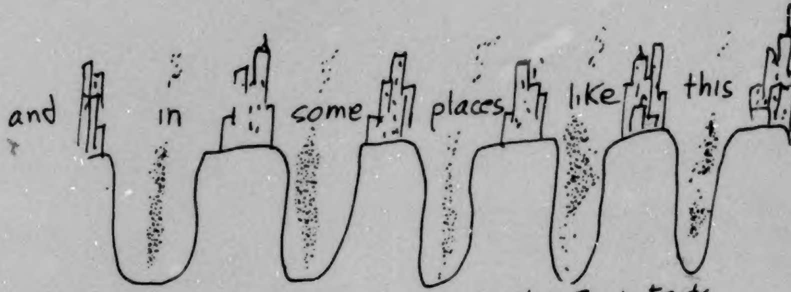
MAKING A DIFFERENCE

Once . . .

Boom!

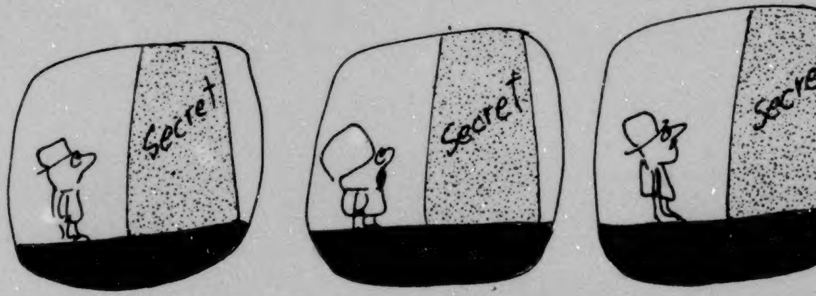


the surface of the earth looked like this . . .



and in some places like this

and it was, of course, all due to the Bomb tests.



Almost every country had its own Bomb.

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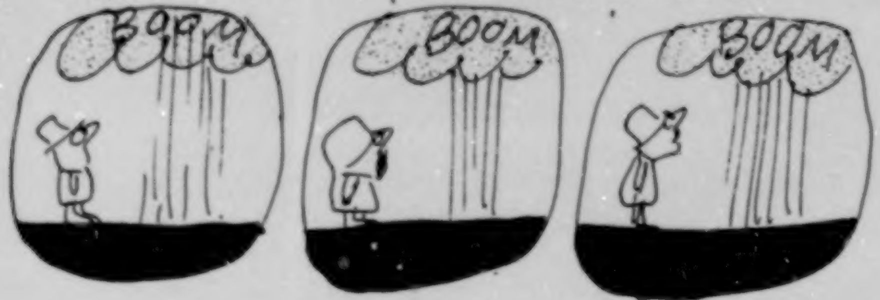
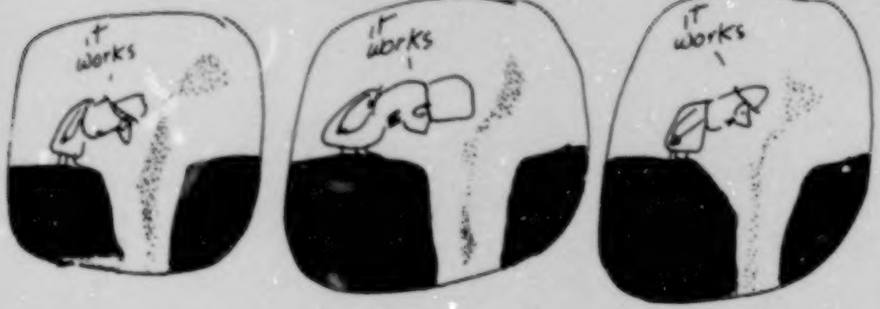
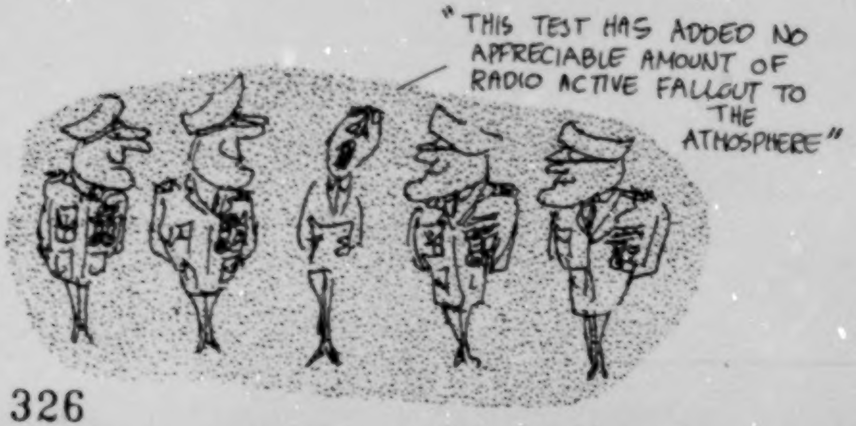
If you've got a Bomb you're supposed to test it.


BOOM
BOOM
BOOM

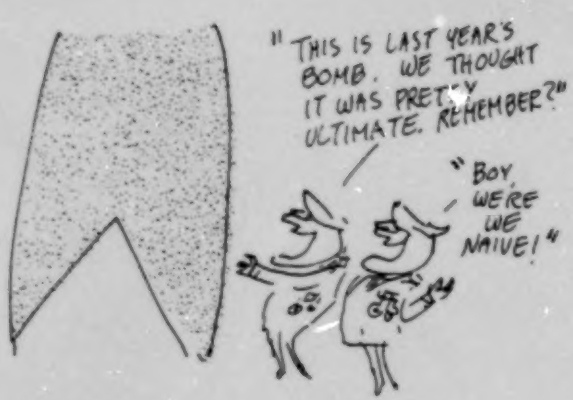
Like to see if it works.


it works
it works
it works

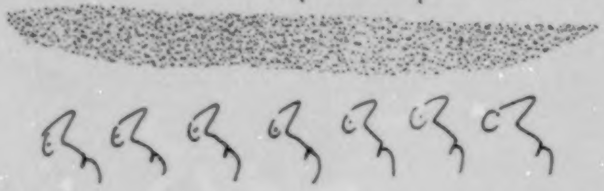
After each explosion the test areas were filled by government scientists who took readings and checked their instruments and issued a definitive statement.


"THIS TEST HAS ADDED NO APPRECIABLE AMOUNT OF RADIO ACTIVE FALLOUT TO THE ATMOSPHERE"

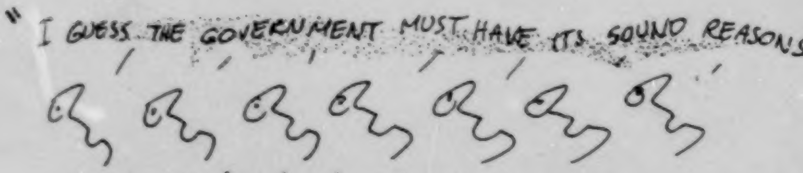
Naturally the more tests there were the better the Bombs got to be


"THIS IS LAST YEAR'S BOMB. WE THOUGHT IT WAS PRETTY ULTIMATE. REMEMBER?"
"BOY WERE WE NAIVE!"

But the skies began to grow darker



and people noticed it and said:


"I GUESS THE GOVERNMENT MUST HAVE ITS SOUND REASONS

and went about their business.

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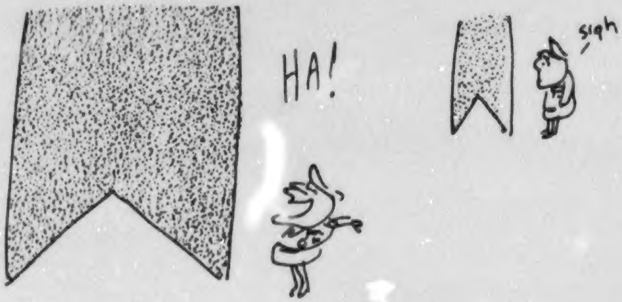
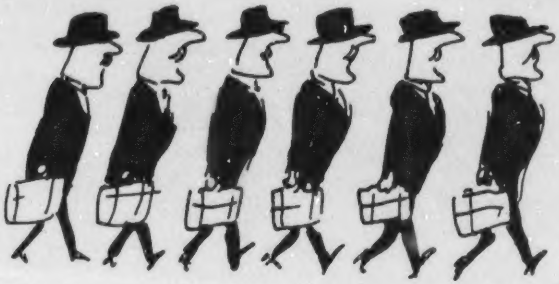
Of course there was more going on than just Bomb tests.

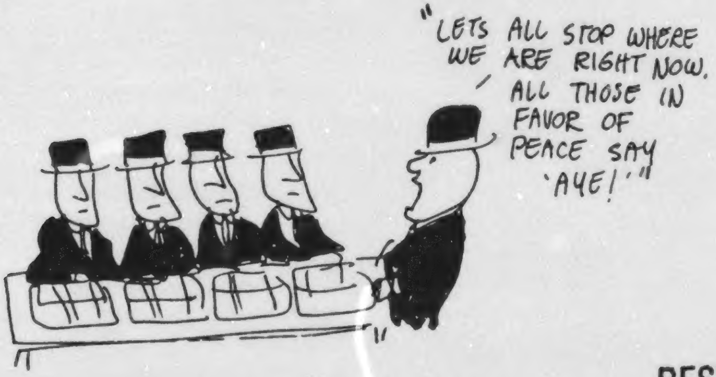
For instance, as soon as one country discovered a bigger Bomb than its neighbor



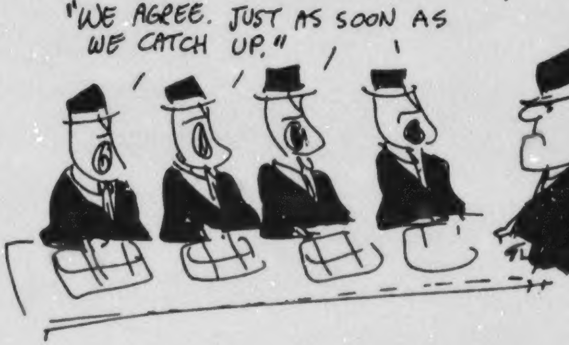
the first thing it did was call a disarmament conference-



and make a proposal-

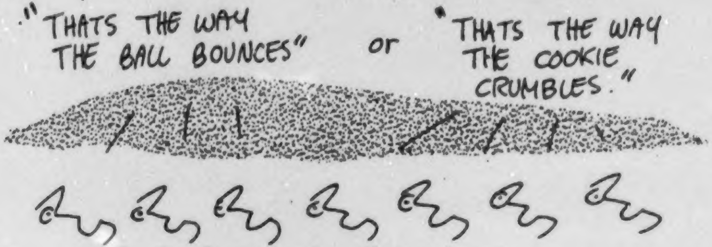

"LETS ALL STOP WHERE WE ARE RIGHT NOW. ALL THOSE IN FAVOR OF PEACE SAY 'AYE!'"

and all the other countries replied:


"WE AGREE. JUST AS SOON AS WE CATCH UP."

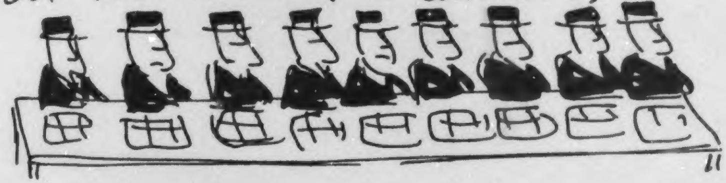
So there was a deadlock

and people heard the news and said:


"THATS THE WAY THE BALL BOUNCES" or "THATS THE WAY THE COOKIE CRUMBLES."

and went about their business.

But the conferences continued.



while more and more countries developed their own Bomb. And naturally all of them had to be invited.

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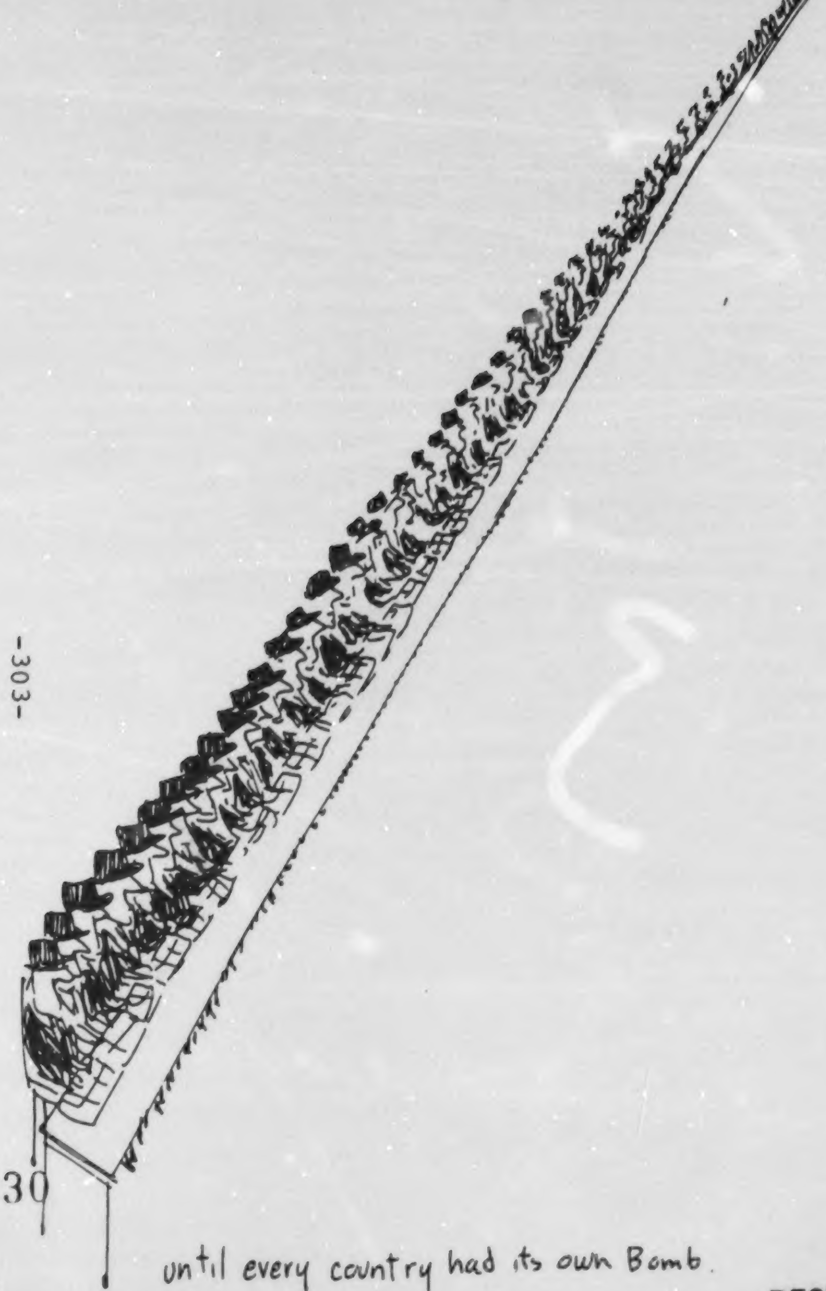
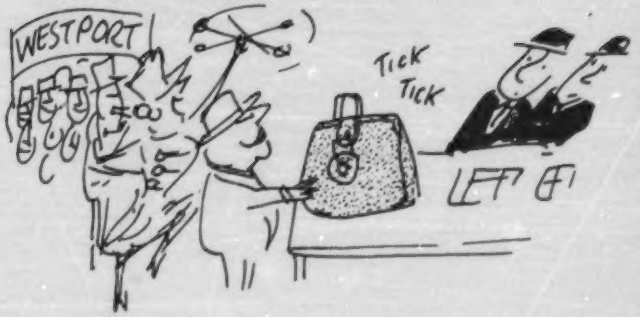
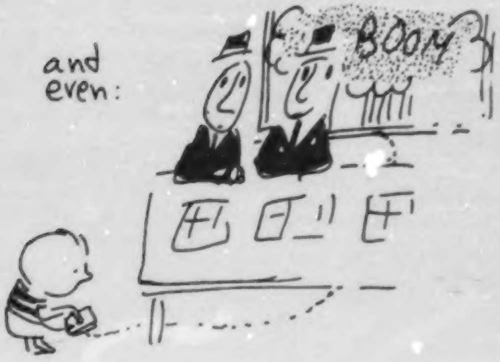


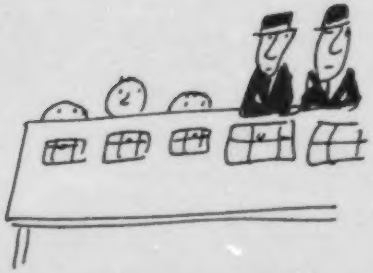
until every country had its own Bomb.

and even some towns..


WESTPORT
TICK
TICK
LEFT

and even:





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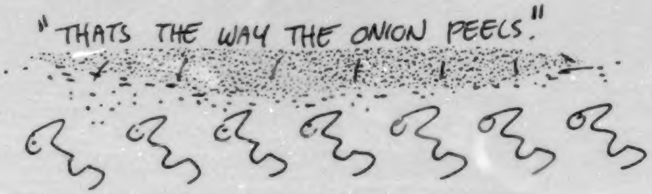
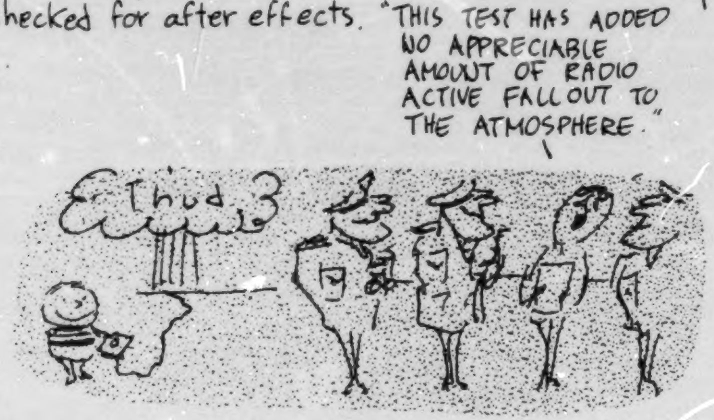
and people heard the news and said:

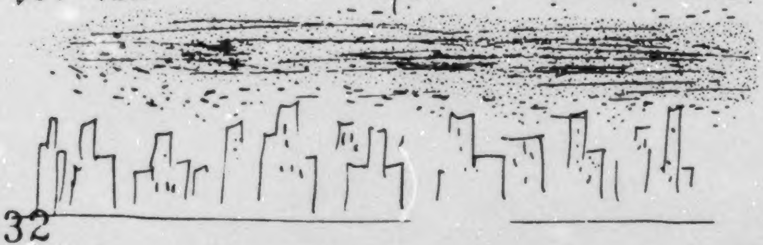

"THATS THE WAY THE ONION PEELS."

and went about their business.

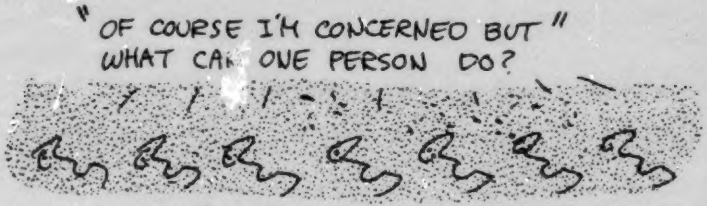
Each test no matter how small, was carefully checked for after effects.


"THIS TEST HAS ADDED NO APPRECIABLE AMOUNT OF RADIO ACTIVE FALLOUT TO THE ATMOSPHERE."
Thud

But now the skies began to look like this.

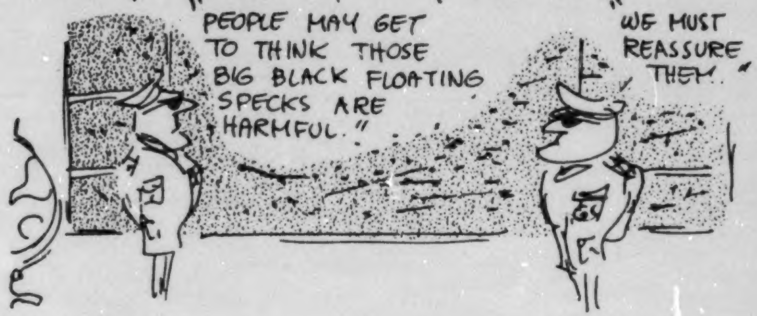


and people noticed it and said:

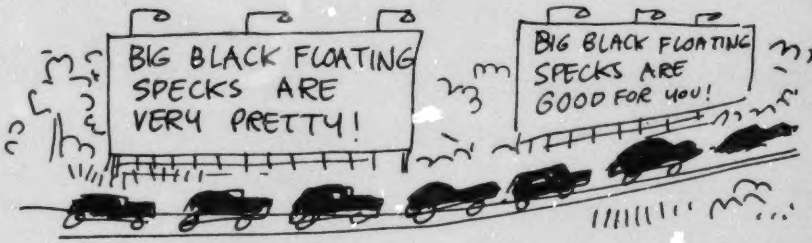

"OF COURSE I'M CONCERNED BUT WHAT CAN ONE PERSON DO?"

and went about their business.

The government began to get worried.


"PEOPLE MAY GET TO THINK THOSE BIG BLACK FLOATING SPECKS ARE HARMFUL."
"WE MUST REASSURE THEM."

So they hired a public relations outfit...


BIG BLACK FLOATING SPECKS ARE VERY PRETTY!
BIG BLACK FLOATING SPECKS ARE GOOD FOR YOU!

which put on a big campaign.

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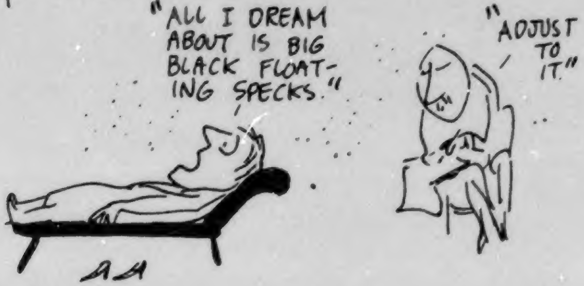
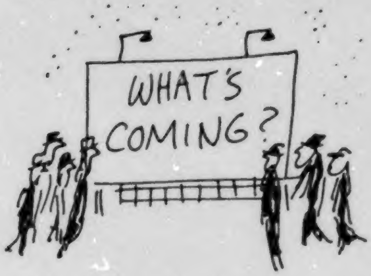
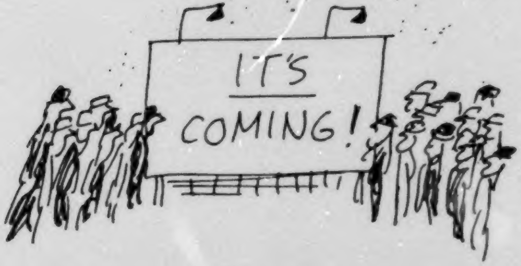
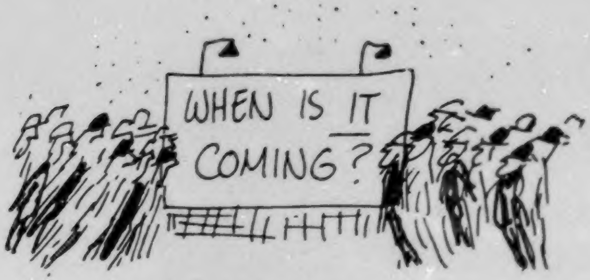
But the campaign had no effect. People got more and more concerned.

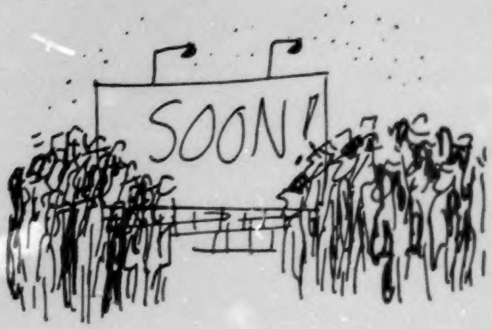

"ALL I DREAM ABOUT IS BIG BLACK FLOATING SPECKS."
"ADJUST TO IT."

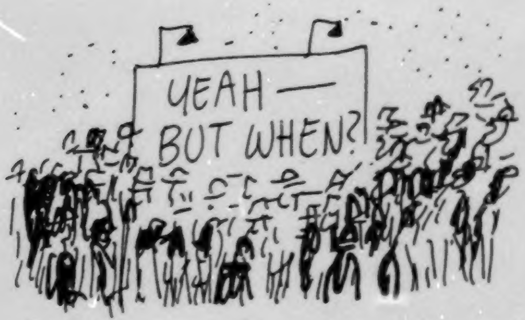
Then the public relations outfit changed its tactics.


WHAT'S COMING?




WHEN IS IT COMING?




YEAH — BUT WHEN?

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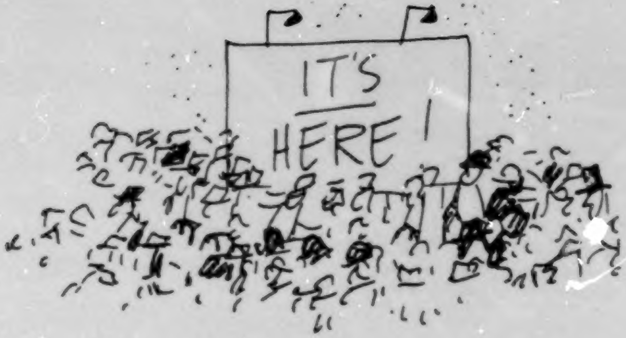
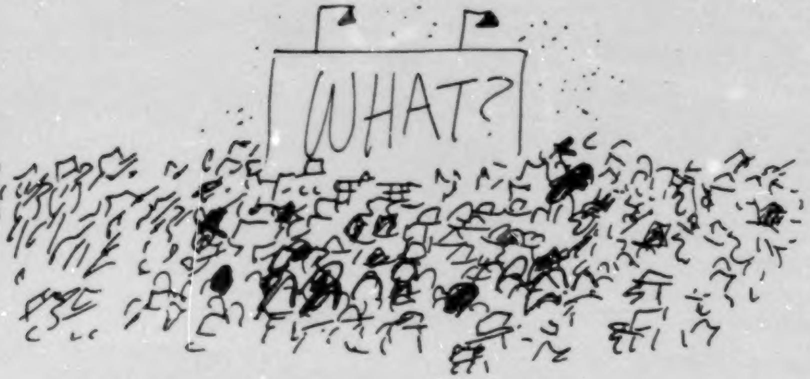
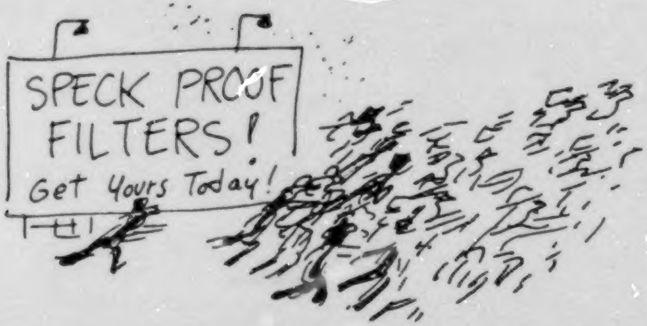
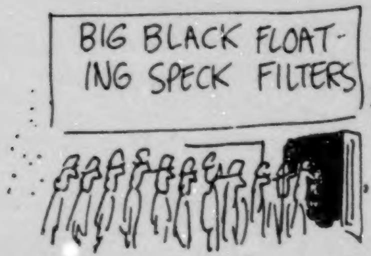
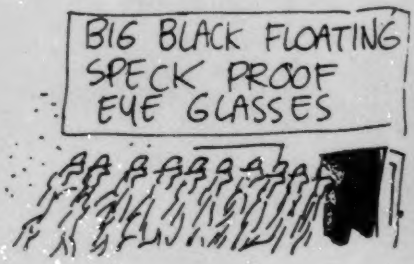


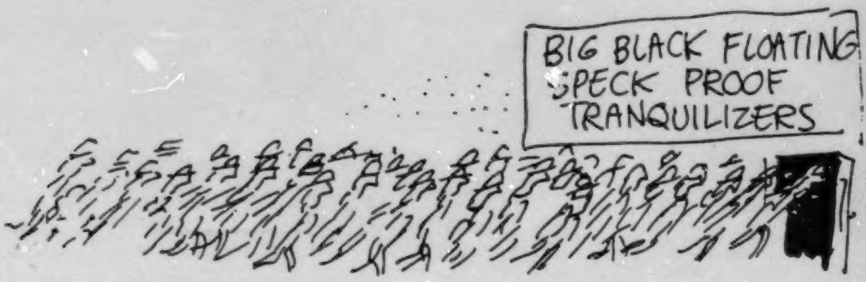



SPECK PROOF FILTERS!
Get Yours Today!

The public responded sympathetically. "WE'RE ON THE RIGHT TRACK AT LAST" said the public relations outfit.


BIG BLACK FLOATING SPECK FILTERS

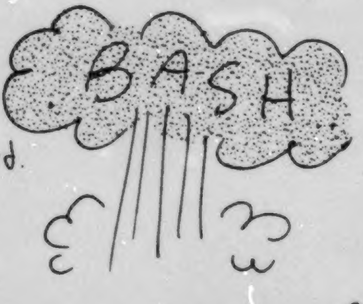

BIG BLACK FLOATING SPECK PROOF EYE GLASSES


BIG BLACK FLOATING SPECK PROOF TRANQUILIZERS

Industry thrived.

World economy boomed.

The problem of over-population seemed somehow to diminish.



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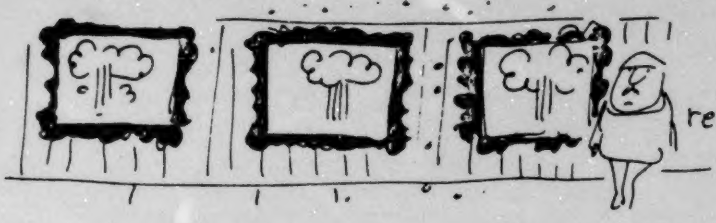
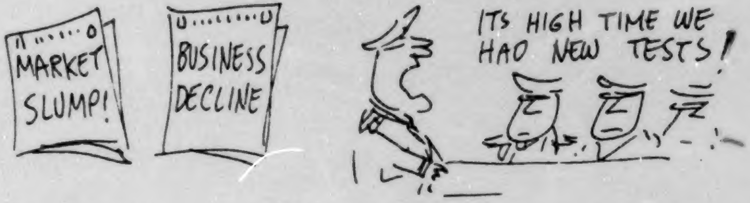
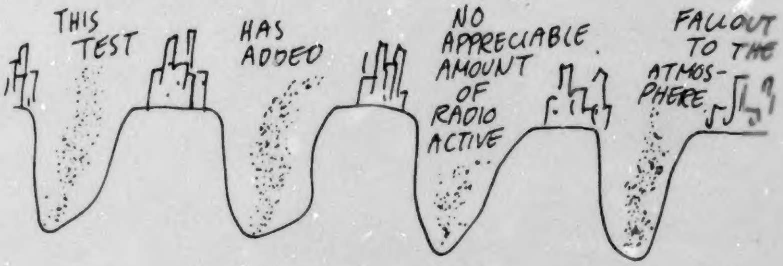
With the thickening of the specks new businesses were born. The world grew rich. Education prospered. Art flourished.



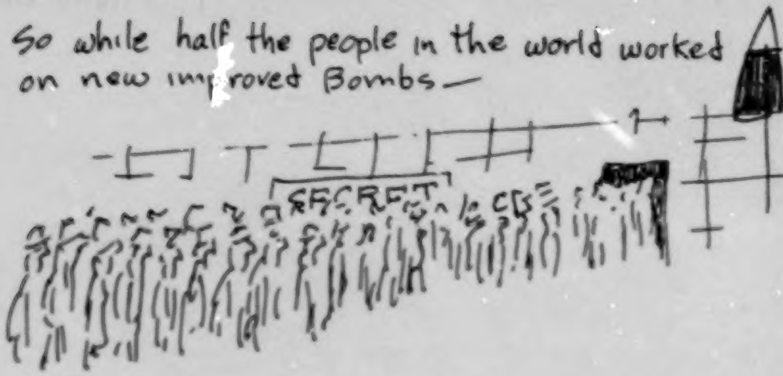
It was a new renaissance

But soon countries grew fat and complacent. Bomb production dropped off. And then - one day - the black specks began to disappear.

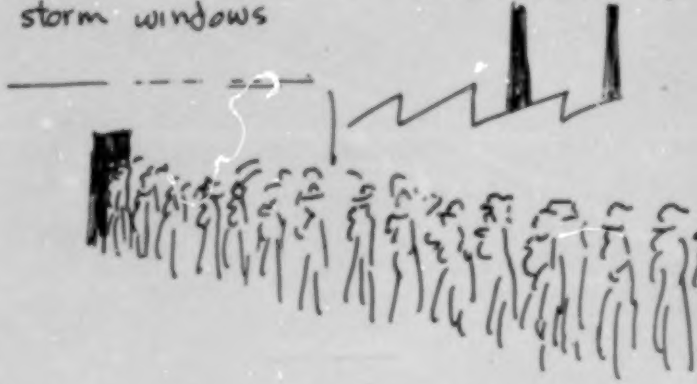

MARKET SLUMP!
BUSINESS DECLINE
ITS HIGH TIME WE HAD NEW TESTS!


THIS TEST
HAS ADDED
NO APPRECIABLE AMOUNT OF RADIO ACTIVE
FALLOUT TO THE ATMOSPHERE

So while half the people in the world worked on new improved Bombs —

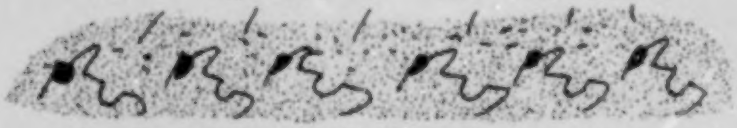


the other half worked on salves, medication, and storm windows



And people saw the situation and said:

"THATS THE WAY THE SPEARMINT CHEWS" -



and went about their business.

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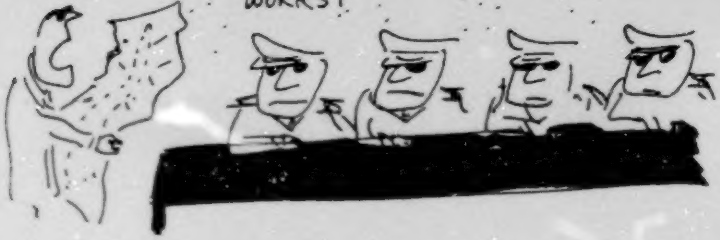
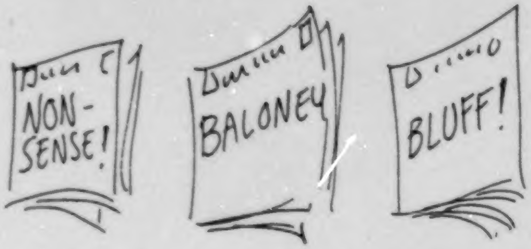
Then one day

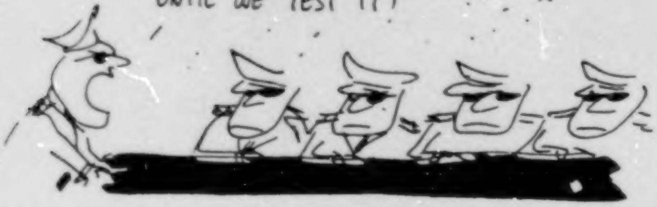

"GENTLEMEN, I MAY BE TALKING OFF THE TOP OF MY HEAD - BUT I THINK I'VE DREAMED UP A BOMB THAT WILL BLOW UP THE WHOLE WORKS!"

"WHAT A DETERRENT FOR PEACE" said men on the inside.

But propagandists in other countries planted seeds of doubt.

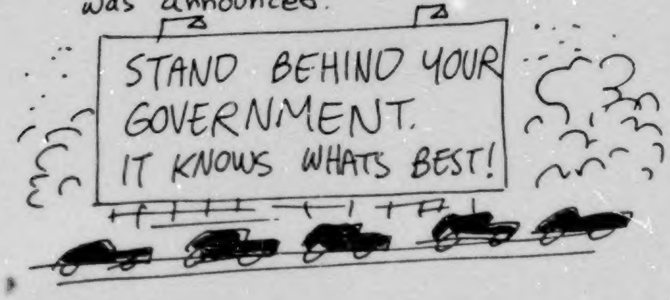

NON-SENSE!
BALONEY
BLUFF!

So the men on the inside got together -

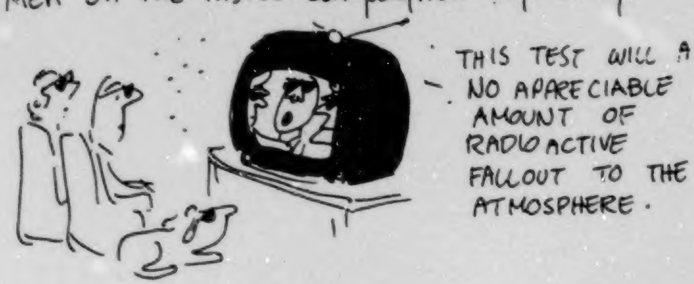

"THIS DETERRENT WILL NEVER BE EFFECTIVE UNTIL WE TEST IT!"

But nobody wanted to take the blame. "HEY!" said somebody, "WHY DON'T WE TAKE THE QUESTION TO THE PEOPLE!"

So it was decided. A referendum was announced.

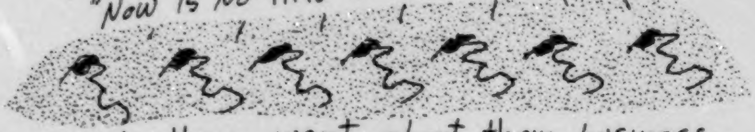

STAND BEHIND YOUR GOVERNMENT. IT KNOWS WHATS BEST!

Men on the inside campaigned vigorously.


THIS TEST WILL ADD NO APPRECIABLE AMOUNT OF RADIOACTIVE FALLOUT TO THE ATMOSPHERE.

The test was given an overwhelming mandat the people said:

"NOW IS NO TIME TO SHOW LACK OF UNITY"



and they went about their business.

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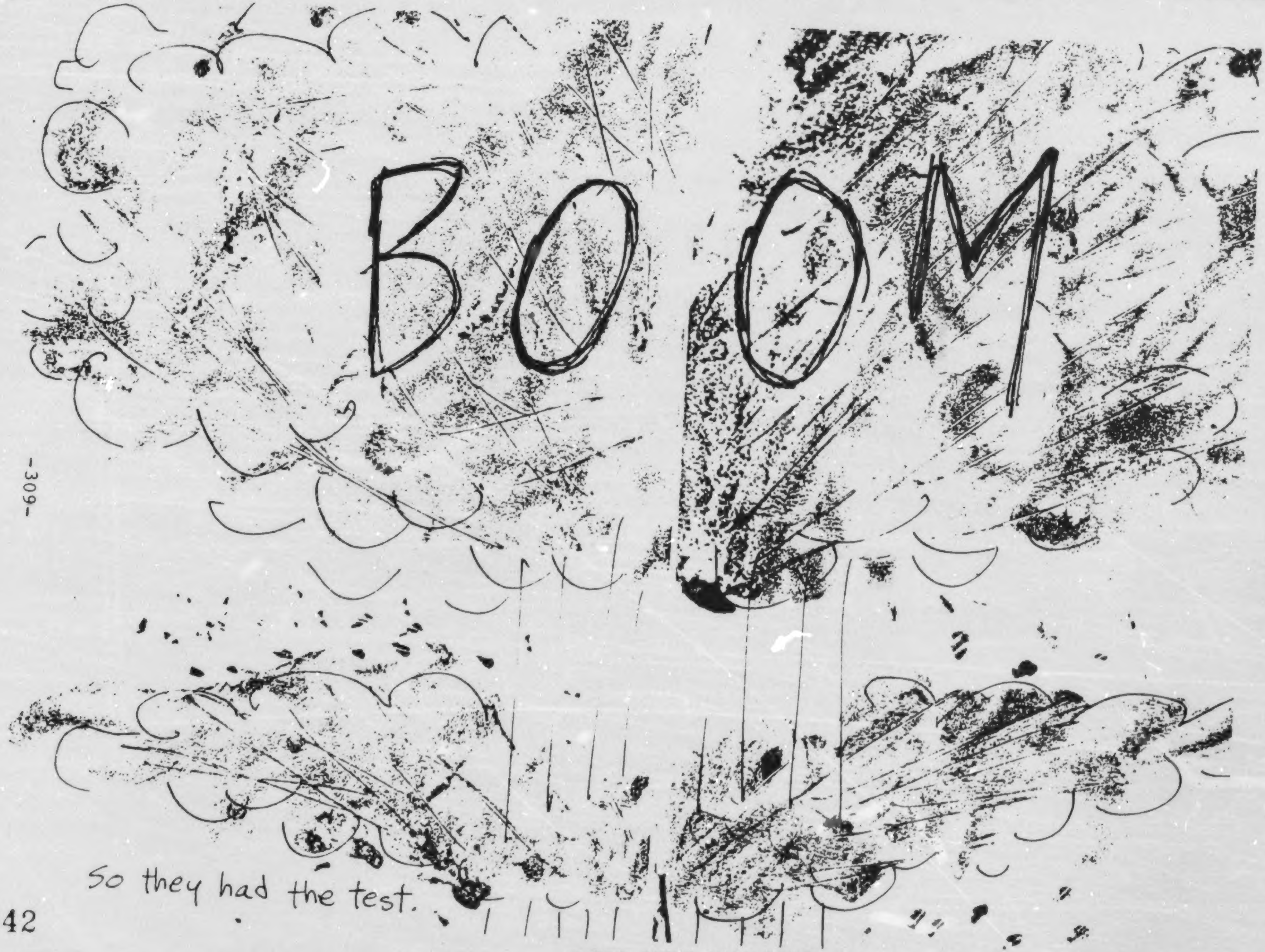

So they had the test.

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and it worked.

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Activity 1: Speaking Out

On October 25, 1982, Educators for Social Responsibility sponsored a Day of Dialogue in schools across the country. The purpose was to allow students to voice their concerns and to ask their questions about nuclear weapons and nuclear war. During the Vietnam war, there had been teach-ins in schools across the country. These teach-ins often taught a particular point of view about the war. They frequently led to strident debate in which the participants took sides but did not hear each other. The goals for the Day of Dialogue were quite different. They included helping students understand how complicated the issue of nuclear weapons could be. Because of the complexities, many high schools' guest speakers provided a variety of viewpoints in either regular classrooms or special assemblies.

At a large public high school in the Northeast, one such speaker began to detail for the students the effects of a nuclear explosion. Several students began to cry. "No, no," they yelled, covering their ears. "We'll all be dead. It's no use. We're doomed." Another student became enraged. She had taken a course about nuclear weapons -- set up much as this one is offered -- and confronted her fellow students: "How can you give up your power like that? One person gives you this stuff and you think you're gonna die. You have to really study this. Then you know. No one can take the decisions away from us if we stick together. You're sick! You're such cowards!"

Connections:

This true incident was reported by the girl to her former teacher after the interchange had taken place. The student was still angry, not so much at her friends' fears as at their "giving up" (her perception). She also acknowledged that she, too, had been both frightened and paralyzed when she first began to study nuclear weapons, but she wasn't sure what had led to her change.

This incident provides an opportunity for students to assess the changes in their own thinking on the issue of personal powerlessness. They can compare journal entries from the beginning of their study of nuclear weapons to how they felt after various topics (physics and effects of a nuclear explosion, negotiations, etc.) were considered. What seems to influence their sense of power? Are they more sensitive to and influenced by information or peer comments? Many high school students report feeling more powerful when they were younger, that people "listen to little kids." Students may be interested in attending a School Committee meeting, when student representatives are scheduled to speak, to assess the impact teenagers can have on adult decision-making. A look at products designed for teens gives some sense of their financial power, although manipulation is also present.

A review and assessment discussion, as suggested here, has value in itself and also serves as a springboard to the final section: "Making a Difference." What ways do students think they can get involved to make a difference in the nuclear weapons debate? They may wish to brainstorm methods of becoming involved and the effectiveness of a variety of suggested tactics from letter-writing, to voting, to lobbying, etc.

Activity 2: "Boom" -- a cartoon

Connections:

Feiffer's cartoon is an example of how people give away their power. Students can list the ways the people in "Boom" gave up their power. Which of those ways operate in other aspects of life, such as making decisions in school or friendship groups, or city-wide issues? Discuss why people tend to give up power more easily on issues like nuclear weapons than disputes among friends.

Introduction

The following 7 activities deal with power and authority. Through these lessons, think about how these issues affect your life.

Activity 3: Power

Write a definition of "power" in journals; share ideas with the class. One possible definition of power is: Power is the ability to accomplish something or to control someone or something.

The term power sometimes has a bad connotation. In our social lives, we do not like people who try to control us. In our political lives, we often complain about the power of the government and about feeling powerless. In international affairs, we find it easy to associate power with war and destruction and others controlling us. In these activities, we will consider the idea that it is not others who control us, but it is the followers who give the power to the leaders.

Relationships between friends

In order to get a better understanding of how power operates, begin by looking at a common relationship that usually avoids power. Such a relation is that between good friends. We describe our relations with friends by using such words as fellowship, sharing, love, understanding, harmony, cooperation, intimacy, warmth, and mutuality (having in common). Let us look more closely at an ideal relationship between friends which might include:

1. The relationship includes liking and affection.
2. The relationship stresses sharing and cooperation.
3. The relationship allows for people to be themselves, that is, to freely express their personalities in action and speech.
4. The relationship is between equals.

Relationships involving power

In relationships between individuals or between groups (societies, nations, gangs, etc.), some of the following characteristics will probably be present:

1. The power relationship is not one in which each party feels personal liking or affection for the other.
2. Sharing and cooperation are not stressed in the relationship.
3. It is not true that both members of the pair gladly allow the other to be himself or herself.
4. The relationship is not one between equals. One party is thought of as being in some way "greater" than the other. This "greater" party gives orders, or makes demands or suggestions to the "lesser" party, who usually carries them out.

Reflect on some relationships you have that include power. Which of the characteristics are involved? Comment on any relationships you have where there is power involved and you feel good about it. Comment on those relationships where power is involved and you do not feel good about it.

Activity 4: Manipulation and Power

To manipulate someone is to control him or her by artful skill. The person who manipulates another usually wishes to appear as though he or she is not exercising power. That is, the manipulator wishes to control other people while seeming to be neither a greater person, nor a person making use of sanctions in order to gain control. For this reason, the sanctions involved in manipulation are usually very subtle ones. Sometimes it may be almost impossible to say what the sanctions are. The person being manipulated will not realize clearly that any sanctions are involved. This is just how the manipulator wants things to be. That is, the manipulator wants the controlled person not to realize exactly what is being done to him or her, not to be fully conscious of the fact that he or she is being controlled.

One way to manipulate people is to cause them to believe that something is true, then sit back while they act on the basis of that belief. The belief may be the whole truth, a half-truth, or completely false. Here are two examples of this form of manipulation:

Bill Calhoun knows that his wife, Mary, wakes every morning as soon as the sky lights up. She never can go back to sleep, and always gets up soon after she awakens. Bill also knows that Mary has been working much too hard lately, and needs very much to get extra sleep. So Friday evening, after Mary goes to sleep, Bill quietly pulls down the blinds and closes the curtains in the bedroom. The next morning the room remains dark for an extra hour or so, and Mary sleeps longer than usual. Bill has manipulated Mary.

The government of a foreign country finds it useful for diplomatic reasons to have its citizens hate Americans. Normally, the people of this country would feel more or less positive about Americans. But now the government orders the press to report only certain news stories from the United States. Whatever makes Americans appear evil, stupid, ugly, unjust, selfish, and war-hungry will be reported fully. Whatever makes Americans appear good, intelligent, attractive, fair, generous, and peaceful will not be reported at all. As time goes by, more and more citizens of this foreign country begin to form a very negative opinion about Americans. They have been manipulated into feeling this way by their national leaders.

Think about these two examples. Why might Bill or a government manipulate others? Is manipulation useful? Is it dangerous? How does it feel when you realize you are being manipulated?

Activity 5: Charismatic leaders

Throughout history, there have been certain leaders who seemed magically to attract people. It is hard to say in many cases just what has enabled these leaders to gather such a devoted band of followers. In some cases, there seems to be no explanation but to say that the leader had "personal power of magnetism." Another word sometimes used is charisma. A leader with charisma seems able without great effort to inspire, awe, and control other people. As for the followers, they rarely have to be threatened in order for them to obey the leader's commands. They seem to accept automatically that the charismatic leader is greater than they are, and they act accordingly.

Do you know any charismatic leaders? How do you feel about them? How can charisma be used as a manipulation? Why is it important to recognize charismatic leaders?

Activity 6: Authority

Authority is "legitimate" power. The word legitimate has several similar meanings. It means lawful and legal. It means rightful, justifiable, and proper. Whatever is legitimate is in accord with well-known and widely accepted rules or standards. So, when we say that a person or group has authority over us, we clearly suggest that we accept that control as proper. We expect to be controlled by that person or group in certain situations.

Almost all of us have been raised to believe that it is right and proper to obey people who are in authority over us. Many of us do so almost by habit. One question we may want answered is whether the authority is "duly constituted." In other words, we may want to know if a certain person has been put in the position of authority through proper legal procedures. In that case, we are agreeing with the control this person has over us.

Give examples of five people who have authority over you. How do you feel about each? Is the authority "duly constituted"? What is your agreement to accept their authority's control?

What makes authority possible?

Power is mainly determined by the followers. This important feature of power also appears in the case of authority. No one has authority because he or she says so. A leader has authority only because his or her followers say so or believe so. It is the followers who determine that power is lawful, legal, accepted, rightful, and duly constituted. Authority is created by allegiance, that is, by the formal loyalty of the followers. Any leader has authority only to the degree that the followers feel that his or her power is legitimate.

These thoughts are neatly summed up by the word consent. When the people consent (willingly agree) to be controlled by certain leaders in a certain system of government, those leaders have legitimate power, or authority.

Comment in your journal upon the following quote from the Declaration of Independence. Explain how it relates to the idea that followers make legitimate power possible.

> "--That to secure these Rights, Governments are instituted among Men, deriving their just Powers from the Consent of the Governed, that whenever any Form of Government becomes destructive of these Ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its Foundation on such Principles, and organizing its Powers in such Form, as to them shall seem most likely to effect their Safety and Happiness."

Activity 7: Power by Consent

Authority has also been defined as formal power, and as institutionalized power. For example, the Founding Fathers drew up a Constitution for the United States of America. That document was ratified around the year 1790, and Americans of today still accept it as the formal, legal basis of their government. The

Constitution provides for many governmental offices, such as President, Congressperson, and Justice of the Supreme Court. Whoever fills these offices, if he or she was put there in the proper manner, has constituted authority over us. When the office changes hands, the outgoing officeholder loses authority, and the new officeholder instantly gains authority.

People who like to exercise power over others usually prefer to work their way into positions of authority. People with authority over others generally have prestige (distinction, reputation). This prestige helps them maintain the power.

Although the leaders have the authority, it is the people or followers who give leaders their authority and who can take the authority away. This is true in a democracy and in any power relationship. Power is given by consent. Power may only be exercised by the consent of the governed.

Very often, people comment that they feel powerless. Reflect on this and on the notion of power by consent.

It is important to note that power is actually the relationship and not something "done" to anyone. Reflect on the statement:

> "The person who feels powerless is forgetting that s/he has agreed to play this role."

Recall a scene where you usually feel powerless. Imagine acting in such a way that changes the roles being played. How might other people feel about you? You might want to do some research about powerlessness and how to overcome it.

Activity 8: Taking Action

We have said very little about judging the uses to which power may be put by those who have it. Many great thinkers have told of their deep mistrust of power and the powerful. Yet, power gets things done. Value judgments about each specific use of power are not merely valuable. They must be made. Not to make such moral judgments is to leave ourselves open to abuse by those in authority roles. But each of us must judge power from his or her own moral point of view. Much has been written over the years about the responsibilities of leadership. Followers have responsibilities, too. They are the final judges of how the power relationship is used. If they find it being used in bad ways, it is they who must limit or end it.

> "All power is a trust."
>
> --Benjamin Disraeli

Was there a time in your experience that you found power being used in bad ways and attempted to limit or end it? Do you have any role models for attempting to limit or end abusive power? In what ways could you be a role model for attempting to limit or end abusive power?

Brainstorm the possibilities for taking action about anything you would like to see changed. You might want to choose a class issue to decide what kinds of actions are possible. What questions does each action raise?

Activity 9: "Saving a Forest" (reprinted from AEP, Social Action)

It is normal for students to be skeptical about what effect their actions could have on the larger community. They don't vote. They can be passed off as being "just kids." Nevertheless, there are many documented cases of a group of teenagers having serious impact on a public debate. The following incident is noteworthy:

"Think of All the Kids Without a Tree"*

Part I

Fronting on the Potomac River in Virginia, 12 miles from downtown Washington, D.C., lie 336 acres of primeval forest and waterfalls, one of the last large pieces of wild land to be found within the suburban perimeter of the nation's capital. Red and gold with maple, oak, beech, sycamore, and hickory in the fall, aflower with mountain laurel in the spring, the rumpled hillside descending to the river offers a green haven for walking, camping, wading, and swimming.

The land was owned by Edward Burling, co-founder of the Washington law firm of Covington and Burling. Mr. Burling spent his weekends in a cabin on that property, and kept going there into his 80's and 90's. Though his family worried about his being there without a telephone, he refused to let any trees be cut down to make way for telephone wires. When Mr. Burling died at 96 in 1966, the 336 acres were left in trust for his descendants. The trustees' duty under law was to get as good a return as possible on the estate for the heirs. They soon decided that they could not afford to leave so much land idle and still pay the real estate taxes, which amounted to about $30,000 a year.

The trustees approached U.S. Secretary of the Interior Stewart Udall to see whether the Federal Government would buy the land as a park. Although no figures were formally discussed, it became known that the trustees would ask about $2 million, and Secretary Udall saw no prospect of finding such a sum. In 1970, the land was sold to a real estate development firm, Miller and Smith, for about $2.4 million. Miller and Smith intended to build 309 homes on the Burling Tract to sell at $68,000 to $100,000 each. The land comes under the jurisdiction of Fairfax County, which had drawn up a master plan for development of the area. As Miller and Smith began to make application to appropriate county officials, conservation groups in the area became alarmed and began to organize opposition to the Miller and Smith venture.

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*Parts of this case, including names of students, are fictional, but all are based on actual events and persons in Fairfax County, Virginia, March-August 1970. Susan, Daniel, Richard DeSanti, and Jeff Wieser, key participants in the actual campaign, assisted in the preparation of this case.

The Fairfax County Board of Supervisors (nine elected officials who govern the county) discussed the plan at their meeting of March 11, 1970. Attending that meeting were adult conservationists (especially from the Old Georgetown Pike and Potomac River Association), the developers, and high school students. A few of the students were aware of the issue and stood firmly opposed to the development. But most of them were simply observing a county board meeting as a class project to see how local government worked.

Those who opposed the Miller and Smith development plan argued that the land should be purchased by the county as a park. The cost could be from $2.4 to $5 million. However, they pointed out that the new Secretary of the Interior, Walter Hickel, had already offered half the purchase price, or up to $1.5 million from federal contingency funds if the county and state could raise the other half. They noted that $600,000 in county funds had already been raised in a general bond issue to acquire a district park. They criticized the developers' plan on the ground that (a) 77 percent of the building sites would be on slopes with grades of 15 percent or more, presenting the danger of serious erosion; (b) sewage and drainage plans were inadequate; (c) the land the developers had reserved for park space and nature trails was inaccessible. For example, a section to be used for this purpose along the river floods periodically.

Miller and Smith argued that their plan was ecologically responsible. They pointed to these parts of their plan: Houses would be clustered in such a way as to leave 52 percent of the land in open spaces, including the palisades and a strip of 26 acres along the Potomac and Scott's Run for a hiking trail. Silt collection ponds would be used during the five-year construction period, with no more than 17 acres graded at one time to keep down erosion. The builders reminded the citizens that this development did not violate any provision of the existing master plan, which provided for a minimum space of one acre per residence. After four hours of testimony, nearly all of it favoring purchase of the land as a park, the board approved the Miller and Smith plan for a housing development.

"They didn't even listen to our testimony," grumbled Richard DeZonia in the lobby after the meeting. A 17-year-old senior at Langley High School, Richard was incensed. "Their minds were made up before the meeting began. What a farce!"

"Cool it, Richard. I don't think the battle is over yet," said Susan Armstrong, a friend from Langley. Susan went on to point out, "I really think the citizens of this area, if it were put to a vote, would support our buying the land for a park. We've got to show those supervisors that people want a park. Let's talk to John."

John Adams, an attorney for the Old Georgetown Pike and Potomac River Association, was one of the few adults who wanted to keep fighting for the park.

"You can't just have a county-wide vote any time you want," he explained, "but you could try circulating a petition, see how many people will sign, and if you get a good response, present the petition at the appeals hearing next month."

"We ought to have a fact sheet for each petitioner," someone suggested.

"I think the petitioners also ought to be given instructions on how to behave," added Susan. "As young people, with long hair, shabby clothes, etc., we have that image problem to overcome. I think we should tell ourselves not to get into long arguments with opponents. It's a waste of time. Let's look at this canvassing as a job of finding where our supporters are, getting their signatures. We can also try to convince people who seem undecided and are willing to listen, but forget the hard-core opposition.

"Another thing. Petitioners should keep track of the percentage of people they contact who sign and don't sign. That way we will have comparative figures, like an opinion poll. They should also be polite and respectful and stress the positive side of things -- how much we need the park, how beautiful it is, the fact that the Federal Government is already offering to pay half the bill."

Richard volunteered to work with Susan on the instruction sheet for the petitioners.

"Suppose some kind soul wants to do more than sign a petition," put in John. "You should set up a special account he could contribute to."

The next Saturday, the students did some pilot canvassing on their own. In two hours, ten students visited 140 houses and got 152 signatures. About 80 percent of the people contacted were willing to sign, but there was no answer at about one-third of the houses. In spite of Susan's reminder that canvassing in one's own neighborhood might be easier than in a strange place, the students were delighted. Of course, they also met some hard-core opponents who complained of high taxes, corrupt politicians, and arrogant kids trying to run the world for themselves.

Richard figured: "We've got to hit about 17,000 votes -- figure two to a house, that's 8,500 houses. Ten of us covered 140 houses in two hours; that's seven houses per hour per person. If we worked a six-hour day, each person could cover 42 houses. To cover 8,500 houses would take 220 people (8,500 divided by 42). We could split it into two days and cover the whole area if we could get 110 kids to petition each day."

Gary Wright, who hadn't said much until now, opened up. "Let's get to the nitty-gritty. Where are we going to find the bodies, and how are we going to organize them? We're dead unless we find the kids -- and they know what they're doing, where to report, what streets to take. I think we ought to organize it by subdivision or neighborhood, get a captain for each area, and let the captain recruit workers and lay out the street assignments.

"But even before they start volunteering, we should officially announce the campaign over the PA at school, put posters around the school and town, and articles in the paper. It would be great if we got out enough publicity so that by the time we get to their doors, the people already know the story."

On a dreary Monday morning, the PA system at Langley High School blasted out: "Help us save the Burling Tract. We're going to canvass the Dranesville District on Saturday, April 4th. We need hundreds of volunteers. If you're interested, there will be an organizational meeting at 4 p.m. Tuesday in the auditorium. If you can't make the meeting, but are interested in helping, please sign up on the sheet outside the main office or contact Richard DeZonia, 976-4894."

By Friday afternoon, April 3, the students had found about 50 volunteers, who attended a meeting in a local church. The kids were divided into ten teams of five, each with a captain who had street maps of the area and who assigned workers to specific areas. Each petitioner was given a fact sheet that read: "FACT SHEET ON THE BURLING TRACT. THE BURLING TRACT IS 336 ACRES OF VIRTUALLY UNDESTROYED FOREST LAND . . . ."

The sheet went on to point out that the land was unique, possessing beauty, wildlife, and natural vegetation. It also said that the developers could not guard against erosion and that their new construction would overload the existing sewage treatment plant. The area, it stated, should become a much-needed parkland. And the cost to the typical McLean taxpayer would be less than $20 a year over a three-year period -- since the Federal Government would pay half the purchase price.

Each petitioner was also given written instructions, including these points:

1. If a person is strongly opposed, don't waste time arguing, but politely excuse yourself and thank him for listening.

2. If a person is in favor, ask for a signature, and ask whether the spouse might also be interested in signing.
3. If they offer money, request a check payable to Burling Tract Fund. Give a receipt for any cash they offer and turn in a copy of the receipt to Richard, and the money too!
4. If a person is undecided, try gentle persuasion, but don't be pushy.
5. Record the addresses where there was no answer. Try to go back to these.

Saturday was a beautiful day--about 65 degrees, with a sunny blue sky. Fifty tireless workers pounded the pavements and knocked on the doors of several subdivisions in the McLean area. At 8 p.m. they wearily converged on Jeff's house for pizza. As they waited for everyone to arrive, and for Paul to add up the totals, they chattered excitedly about their experiences:

"You wouldn't believe it," raved Bob. "This guy, he's about 60. He signed the petition and then offered a $1,000 donation to the cause!"

Jill and Karen told of a long discussion with a lady who was completely against Burling as a park -- "We couldn't change her mind, but she invited us to stay for dinner."

Hovering over Paul's shoulder as he tallied the petitions before him, the students noticed that almost everyone had obtained at least eight signatures. A few had more than 30.

"Are they all in?" Paul shouted. "I think about four kids are missing. Anyway, the grand total at this point is 993. If we do this well tomorrow, we're sure to break 2,000 because we haven't even covered half the area yet." By Wednesday, April 8, the students had collected signatures from 2,362 voters.

Richard and his friends were shocked, however, when the Board of Supervisors, after hearing several people testify for the park and after being presented with the petitions, voted for the real estate development. Only one supervisor, who had been an ardent supporter of the park and who assisted the students in dealing with government authorities, voted for the park.

As Richard recalled, "During a ten-minute intermission we descended on those supervisors for an intensive lobbying effort. 'How can you possibly defy the wishes of the people you represent?' we pressed. When the board reconvened, they voted to request the County Park Authority to study the possibility of a park on the Burling Tract. We were delighted that we hadn't yet been wiped out."

A few days later, Sally Hoffman bubbled with excitement as she reported that Mr. Strang, a local printer, would supply bumper stickers at 10 cents each. They could be sold for 25 cents to raise money for the campaign. "I told him to make 1,000, and he'll have them done by Friday." Some of the students had second thoughts as to whether Sally should have acted without getting the group's approval. Suppose they couldn't sell enough stickers to pay the $100 to the printer? Who would be responsible for the bill?

Before they could discuss the matter, Sally came out with more news. "Through Sharon Franks, I've met reporters from The Washington Post and the Star. They and the two local papers want us to keep them informed. So, if you kids have anything to put in the papers, please write it up and give it to me."

"Fine," cautioned Jeff, "but let's not let the publicity go to our heads. We'll never succeed if this becomes an ego trip."

To prepare for the Park Authority hearing on April 29, Susan suggested that all people who signed the petition be called and invited to the hearing.

"I wonder whether that's necessary," replied Jeff. "If most of them spoke, there would be a lot of hot air and uninformed testimony. Maybe we should select speakers more carefully."

"But one of our main points is that thousands of people want a park, not more housing. The best way to make that point is to let people speak for themselves." Susan felt so strongly one sensed a bit of anger in the reply.

Jeff insisted, "Politicians are very sensitive about being pushed into something through emotional pressure -- they don't want to be intimidated, and they could react against us if the pressure got too great."

"Pressure -- that's where it's at in politics," reminded Paul. "But I'm worried that our opponents might start applying more pressure. Maybe they would stay home if we kept quiet, using just a few good speakers."

"That really burns me," exploded Susan. "What kind of hypocrites are we? We condemn the politicians for secrecy and not listening to the people, and now we ourselves are talking about slipping something by the people."

"I don't have any obligation to help my adversaries beat me," countered Paul. "My job right now is not to help all citizens participate in government, but to save the damn land for a park."

On April 29, in the Langley High School Auditorium, the Park Authority heard the testimony from dozens of people, most of them in favor of a park. The students even requested that the Park Authority view a film called "Children and Trees" made by Philip

Vaughn, a student in Iowa. The film contrasted the laughter and wonderment of children frolicking in the woods and meadows with the roar of bulldozers creating barren wastelands. At one point, Grafield Kass, age 79, stood up and offered to loan the county $1.5 million at 5 percent interest so that it would be easier to finance the acquisition of the Burling Tract. He also pledged $25,000 as an outright gift if the county decided to buy Burling. He did this, he said, because he was so impressed with the way the students were working for something they believed in.

In spite of the enthusiasm for the park, opposition came from significant sources. A representative from Little League and other sports groups called the proposal "a waste of Dranesville District money." The Pimmit Hills Civic Association suggested that approving the park would be giving in to special pressure groups, and that it would create a police problem because of vandalism, drinking, etc. The Fairfax County Chamber of Commerce argued that the tax levy required to buy the park would fall heavily on local industries and commercial businesses. The representative said, "Let's face it, this county is broke, and there are many other problems such as low-cost housing, highway safety, and juvenile delinquency that we have to face."

The following evening the Park Authority voted unanimously that it was feasible and desirable to have the District Park located on the Burling Tract. Having received this recommendation from the Park Authority, the Board of Supervisors then requested a ruling from the Planning Commission, the body that coordinates use and development of county properties.

The commission had to decide whether to place Burling on the Public Facilities Map, the official expression by the county of its intention to buy a piece of land. The commission hearing was held a month later on May 28 in Fairfax City, the site of the county offices.

Richard recalled: "It lasted until 3 o'clock in the morning. There were so many people there that the commission invited students to come up and sit on the rug between the speaker's podium and their desks. Speakers were surrounded by a sea of pro-park faces, which must have made it rather uncomfortable for our opponents, but easier for us. There were at least 150 students from all over the county, about 15 faculty members, and a lot of parents.

"The commission let the students speak at the beginning of the hearing. We were careful to include a variety of approaches in our presentations: the signed petitions; factual information about the consequences of a development versus a park -- this included charts, maps, and statistics; an appeal to save the park simply for its beauty. We showed the film "Children and Trees" and concluded with a folk song written by Susan:

Burling Song

Think of all the children in the suburbs,
Think of all the concrete and the tar,
All they see are bricks and growing bushes,
Never climb a tree to reach a star.
Think of all the kids without a forest,
Think of all the kids without a tree . . . .

"We like to think that this presentation was about the most 'together' thing we ever managed to do."

That night the Planning Commission voted unanimously to place the Burling Tract on the Public Facilities Map.

Part II

Where would the county get the money to buy the park? It was estimated that Miller and Smith would not sell the land for much under $3.5 million. That amount could be raised if the voters in the Dranesville District would tax themselves up to $1.5 million extra. This, if added to the $1.5 million offered by the Secretary of the Interior and the $600,000 earlier allocated by the Park Authority, would total $3.5 million.

The Board of Supervisors finally authorized a referendum to determine whether the voters would tax themselves up to $1.5 million for this purpose. The referendum was set for July 14. The students took a break for a week to study for exams, but decided to start a referendum campaign on June 8. They met with a number of the adults interested in establishing the Burling Campaign Committee.

Without much discussion, the group agreed to organize themselves into the following committees, each with at least three volunteer co-chairpeople (young people and adults): Speaker Bureau Committee; Voter Turnout Committee; Press and Publicity Committee; Campaign Rally Committee; Contributions and Pledges Committee. Jeff wrote a press release announcing the formation of these committees and giving names and phone numbers of the co-chairpeople.

The students were committed to another door-to-door campaign to explain to the voters why Burling should be saved as a park and why they should vote to tax themselves for it on July 14. (Signers of the earlier petition had not necessarily agreed to tax themselves, nor was the earlier petition a legal referendum.) In writing a new brochure, the "Burling defenders" had to deal with a conflict among people who favored the park: the ballplayers versus the nature lovers. As Richard recalled: "The 'active' recreationists claimed there wouldn't be enough land on Burling available for playing fields. We tried in the brochure to reassure both sides." Since financial concerns were uppermost in the voters' minds, the brochure also dealt with that issue in detail. Excerpts from the four-page document follow:

What Kind of Park?

- --untrammeled nature, where, in the mood of Thoreau, "The mind may freely wander"
- --swings, ball fields, and tennis courts for active players
- --hiking trails, tying into the Potomac Heritage Trail and a trail down Scott's Run
- --a nature center for the study of ecology in natural surroundings
- --a stable and a bridle trail
- --fishing, canoeing, and boating on the Potomac
- --rock-climbing on the palisades
- --a skating rink for wintertime
- --a natural amphitheater for community programs

How Can We Afford It?

The exact purchase price of the Burling land will be determined either by negotiation or in a court of condemnation. It is known that the present owners paid $2.4 million for the land on May 5. A standard condemnation award could be in the vicinity of $3 million, and certainly not more than $3.5 million. We have $2.1 million guaranteed. The balance of $900,000 to $1.5 million must be raised from additional sources. The levy per household would be relatively modest. Assuming that the maximum (the full $1.5 million) is assessed, the retirment of principal and interest (6.5 percent) over a ten-year period would cost in increased taxes:

	$30,000 Home	$40,000 Home	$50,000 Home
1972	$10.80	$14.40	$18.00
1976	6.24	8.32	10.40
1981	3.00	4.00	5.00

Seldom can so much be bought for so little. A few dollars from each family can buy a $3 million park for the community and for generations to come.

On July 6, Sally heard from one of the layout people she knew at the Journal that the opposition was planning a full-page advertisement. She quickly spread the word and -- although an ad of their own would cost $250 for a full-page -- they were advised by one of the adult co-chairpeople to take it. On July 10, the Journal was full of Burling articles and advertisements. The pro-park people bought ad space on page 3, and the Chamber of Commerce bought space on the more eye-catching back page. Both advertisements dealt mainly with financial details. The pro-park people emphasized the federal contributions and the low cost to the average taxpayer. The anti-park ad raised questions of site development costs and possible future tax burdens.

According to Richard, the day of the referendum, July 14, came much too soon: "It was probably one of the most ghastly experiences in our lives," he recalled, "but one that we wouldn't have missed for anything. Our activities that day were aimed at getting voters out to the polls, and once they were there, reminding them to vote Yes for the Burling Tract. We set up headquarters at a house with two telephone lines, and kept it staffed with someone to relay messages, arrange rides for people, and line up people to work in areas where we were generally shorthanded.

"We had people at each of the polling stations all day, handing out pro-park literature, sitting directly across from people handing out anti-park literature. Other people were 'floating' from poll to poll, keeping the workers refreshed with cold drinks and hot coffee, making sure that they had enough leaflets, and solving various crises. Other people rang doorbells, reminding people of how important it was for them to come out and cast their votes. We had people stationed at each poll to phone in results as soon as they became available after the polls closed. We went to Jack's house to wait for the returns. As the results from the polls came in, we could tell it would be close. After two hours of waiting, we finally learned by radio the final vote: 3,208 for Burling; 2,758 against. We had won by 450 votes.

"We piled into our cars and headed for the Burling Tract. First we drove around taking down 'Vote Yes' posters so they wouldn't be eyesores. It was 11 p.m. when about 200 people walked back to the Potomac River on the edge of Burling and 'consecrated' it as parkland."

In spite of the petitions, the hearings, and the referendum, on July 16, Miller and Smith bulldozers blocked the access roads to the Burling Tract. The company intended to proceed with its development plans. They were within their legal rights since they still owned the land. The county had not even made an offer to purchase. County officials hoped to negotiate a settlement out of court, but if this was not possible, they would have to file a condemnation suit. All of this would take some time. But the students wondered what would stop the bulldozers.

"We had a silent vigil in front of the developers' office for three days before they started bulldozing, but on July 27, they began anyway. We went to Burling and held signs and sang to the bulldozer operators: 'Please do not cut our trees, think of all the children in the suburbs, think of all the kids without a tree.'" The signs and songs did not stop the bulldozing. Several acres of trees were leveled in a few days as the developers rejected a county offer of $2.5 million.

But now Senators Brooke (R-Mass.), Harris (R-Okla.), and Spong (D-Va.) lent their influence to the student course. So did Virginia's Governor, Linwood Holton, who wrote a letter endorsing the park and indicating a willingness to search for state monies to assist in the purchase.

Pro-park advocates urged the County Board to request a court injunction, ordering that bulldozing be stopped to give the county time to negotiate with the developers and to file condemnation suits if necessary. Developers claimed that delays in construction were costing them $100 per day in interest and taxes. By August 1, the local judge announced he would issue an injunction to stop the bulldozing if the county would put up a $300,000 bond to guarantee the developers $1,000 per day in case the county were to reject a final condemnation price and decide not to buy the land. While waiting for the Board of Supervisors to make up their minds, 50 to 75 young people trucked off to the woods each morning at 6 a.m. Many stayed until 10 a.m., displaying their signs to the bulldozer operators and singing their own version of "This Land Is My Land":

PLEASE STOP

(chorus)

This land is your land, but it should be our land,
From the Georgetown Pike to the Potomac floodlands,
From the Beltway exits to the Scott's Run waters,
This land was made for you and me.

On August 5, the Board of Supervisors agreed to the terms of the injunction and eventually negotiated a purchase of the land for $3.6 million. The students' fight to save Burling and their victory were soon publicized in such national news media as The New York Times and National Wildlife magazine.

By January 1972, Richard reported, "Since the battle, Burling is used extensively by people of all ages and is a major recreation area in McLean. There has been a certain amount of vandalism, drugs, and other illegal activity but, according to the Fairfax County Police, there has been no more than you would be likely to find at any other county park."

Connections:

"Saving a Forest" has been divided into two sections: the first deals with the initial governmental processes; the second with the final victory. Teachers may choose to deal with only the first section which raises many issues of how students may affect the decision-making process.

Certain study questions may help students understand why the Langley teenagers were successful.

For Part I:

1. List all the tactics students used in organizing for the meetings. Predict their effectiveness.
2. How many levels of government were involved in the process of deciding about the Burling Tract? What was the effect of having four different hearings?

3. There were four governmental hearings on the Burling Tract from March 11 to May 28. Who held each hearing? Why did the vote change so dramatically?

For Part II:

1. Why was the decision to place the Burling Tract on the public facilities map not the end of the process?
2. What were all the jobs the students had to perform over the summer vacation?

The entire reading raises many important issues -- relevant to nuclear education -- for student discussion. First, does it make sense to become involved in a struggle you may not win? How do you prepare for such a struggle? How can a group maintain commitment? It is noteworthy that the final vote took place during summer vacation when so many students might have chosen to go away. Students may wish to speculate on how influential each of the many factors was: committed students, support from influential adults, press coverage, political endorsements, the type of issue, federal funds, skillful organization.

A further connection in the context of nuclear weapons is one of manipulation. Students may wish to review the quote which opened this course: "You know you could really use kids in something like this." How can students be sure when they become involved in a social action project that they are acting of their own volition rather than as someone else's pawns? Should the petitioners have stressed only the "positive side of things"? Was "What Kind of Park?" a fair picture of the question? Students may wish to create an anti-park brochure.

The lawfulness of certain activities also merits consideration. Should the school have allowed students to use the high school PA system for what might be a partisan announcement? How much support in terms of time or teacher expertise should the school have offered? Should Sally Hoffman have contracted for the bumper stickers? Were Miller and Smith correct in bulldozing the land?

The type of dialogue engaged in by the Langley students presents another connection to other sections of this curriculum. Students were advised not to try to persuade opponents of the park to change their minds. Why was that decision made? Does it seem sensible? Anyone has the right to speak at a public meeting. What benefit came from limiting the speakers and planning their remarks? Does that seem fair?

Students may also wish to explore their own motivations for becoming involved in a social action project: commitment to the cause, good feeling that comes from helping others, wishing to participate with friends, curiosity about the process of social change, feeling important, etc. Do they think the motivations for becoming involved affect commitment, strategies, or final outcome?

Activity 10: Civil Disobedience

1. Civil disobedience -- illegal action against authority undertaken in a civil manner. Involves selective violation of the law. It's purpose is demonstrating and acting on our conviction that if required changes are not made within the laws and courts then we will make those changes ourselves.

   Do you feel that civil disobedience should be labeled a "criminal act"? How might it be different? How do you decide whether it is right to break a law?

   Have you ever decided to break a law that you thought was unjust? What were the risks? What were the gains?

   What are some of the feelings you have about people who break the law to support what they think is right?

2. Research one of the following actions. Try to find out what kind of education and support systems these people had to encourage them to take an action.

   a. The Boston Tea Party.

   b. Henry David Thoreau's refusal to pay taxes in protest of slavery, 1849.

   c. Susan B. Anthony's illegal vote and subsequent trial in Rochester, NY, 1872.

   d. The Suffragists' use of pickets at the White House, and their arrests and jail sentences as a result, 1918.

   e. The sit-down strikes in the automobile factories of Detroit, 1930's.

   f. The sit-ins at lunch counters in the South by Black students and other civil rights activists in the 1960's. (Coming of Age in Mississippi by Anne Moody is a good autobiographical account of this.)

   g. Rosa Parks and the Montgomery, Alabama bus boycott.

   h. Martin Luther King's activities in the 1960's civil rights movement.

   i. The draft resisters of the Viet Nam War era, and the current draft resisters.

   j. Sit-ins at the UN in support of disarmament, June 14, 1982.

Consider the following quote by Dr. Martin Luther King:

"I submit that an individual who breaks a law that conscience tells him is unjust and who willingly accepts the penalty of imprisonment in order to arouse the conscience of the community over this injustice, is in reality expressing the highest respect for the law."

What do you think of this idea? How does Dr. King's notion of "respect for the law" compare with your own?

Activity 11: Protectors of the Unborn

Hard work and sound research enabled the students of Langley High School to prevail in their attempt to conserve the forest. Businesses such as pharmaceutical companies also use both hard work and research to obtain governmental permission to sell their products in the American market. They employ lobbyists whose job it is to persuade Senators, Congresspersons, and government officials of the merits of their products. Employees of governmental agencies, on the other hand, must assess the safety of the product, especially in light of any social benefits which may result from it. They must carefully weigh both the scientific evidence as well as other factors. Although their work differs from that of citizen activists in that they are paid to do their job of being guardians in the public interest, or of being lobbyists for individual companies, they all must follow many of the same procedures in order to attain their goals.

The following reading details a classic confrontation between lobbyists for a pharmaceutical company and a doctor working in the Federal Food and Drug Administration.

PROTECTORS OF THE UNBORN:

Frances Kelsey & Helen Taussig

(from Who Says You Can't?)

Part I

Frances Oldham Kelsey, M.D., started work as a medical officer with the Food and Drug Administration in August, 1960, processing applications for new-drug approvals without which "new" drugs may not be sold in the United States. The first NDA, or New Drug Application, assigned to her came from the William S. Merrell Company; it sought approval of Kevadon, a sleeping pill already being widely marketed in Europe under other trade names. Kevadon's active ingredient was the drug thalidomide.

Though Dr. Kelsey had no way of knowing it at the time, thalidomide had already been responsible for the birth of hideously deformed babies in West Germany, where the drug had been sold for some three years. Even German doctors had not yet learned the cause of those tragic births which eventually numbered in the thousands throughout Europe. That thousands of similarly deformed babies were not born in the United States was owing almost entirely to Dr. Kelsey -- the stubborn Dr. Kelsey, as she was often called -- and to Dr. Helen B. Taussig of Johns Hopkins University Hospital who played an important role in the final chapter of the amazing story of thalidomide in America.

Dr. Kelsey was an experienced physician and pharmacologist when she joined the FDA. Born Frances Oldham in 1914, on Vancouver Island in British Columbia, she had majored in science at Montreal's

McGill University. A fellowship brought her to the United States to take her doctor's degree at the University of Chicago and then to join that university's faculty as a pharmacologist. A few years later she married another Chicago University pharmacologist, F. Ellis Kelsey.

In 1952 the Kelsey family moved to Vermillion, South Dakota. There, after completing her internship, Frances joined the School of Medicine's faculty. Afterward she practiced medicine in Vermillion, and frequently took over the practice of a doctor in some small isolated one-doctor community, when that physician was ill or had to be away.

In 1960 the Kelseys moved to a suburb of Washington, D.C. Dr. Ellis Kelsey had been called to the National Institutes of Health, the research institutions of the Public Health Service. Like the Food and Drug Administration, these institutes are a part of the Department of Health, Education, and Welfare. Frances' background ensured her a welcome at the FDA's Bureau of Medicine.

In a drab uncarpeted office, in what had once been a barracks erected during a wartime space emergency, Dr. Frances Kelsey settled to work on her initial assignment: Merrell's NDA for Kevadon. The application filled several large volumes of charts, figures, and reports, each as thick as a big-city telephone directory. They dealt with Kevadon's chemistry, with the pharmacological and clinical studies that had been done on the drug, and with the marketing description and labeling Merrell intended to use on its new product.

Dr. Kelsey's responsibility was to evaluate Kevadon for its safety. (Before the passage of new legislation in 1962 the FDA had no authority to demand proof of a drug's effectiveness for its intended uses.) She handed some of the volumes to the bureau's chemists and pharmacologists, and tackled the rest herself, reading and rereading hundreds of pages of words and figures. Bureau regulations required that an NDA had to be accepted within sixty days of its submission, or be declared unacceptable within that time; in the latter case it could be resubmitted in a revised form if the applying company wished.

Merrell took for granted that the report on Kevadon would be favorable. Thalidomide had been used since 1957 in West Germany, in England, and in Portugal. And everywhere it had been hailed as the best sedative ever devised. Throughout Europe thalidomide sleeping pills were selling by the millions, in some cases over the druggist's counter, without prescription.

European reports on thalidomide, alone or in combination with other drugs, seemed consistently enthusiastic. (Not until years later, when the German originator of the drug was being sued by hundreds of parents of deformed children, did the public learn that contrary reports had been repressed.) All insomniacs who took thalidomide were said to awake in the morning refreshed.

In October, 1960, therefore, only a few weeks after submitting its New Drug Application to the FDA, the 134-year-old Merrell company, experienced in the techniques of drug promotion, inaugurated a Kevadon Hospital Clinical Program. It called together its corps of detail men, who are to the drug industry what traveling salesmen are to other manufacturers, and gave them instructions on how to invite doctors to undertake "experiments" with Kevadon. At that time the law permitted such experimental programs to be carried out without the surveillance of the FDA; investigating doctors did not even have to tell patients that they were being used as guinea pigs.

"We have firmly established the safety, dosage and usefulness of Kevadon by both foreign and U.S. laboratory and clinical studies," the manual issued to the detail men stated. "This program is designed to gain widespread confirmation of its usefulness in a variety of hospitalized patients. If your work yields case reports, personal communications or published work, all well and good. But the main purpose is to establish local studies whose results will be spread among hospital staff members. You can assure your doctors that they need not report results if they don't want to but that we, naturally, would like to know of their results . . . . Appeal to the doctor's ego -- we think he is important enough to be selected as one of the first to use Kevadon in that section of the country."

Merrell was setting the stage for the sale of what it expected to be a highly profitable new product.

Its investigational program succeeded even beyond its expectations. The detail men had, Merrell said, "exceeded the 'quota' for the number of studies and doubled the 'quota' for the number of patients," with 30,000 patients involved.

But by then Merrell had already received Dr. Kelsey's report on its NDA. On November 10, just before the sixty-day period ran out, she had informed the company that its application was incomplete and inadequate to demonstrate the drug's safety. She specifically described the chemical data as incomplete, and the proposed labeling as "unsuitable."

Merrell automatically resubmitted its application, and in the next two months, Dr. Kelsey received four new batches of data on the drug. Once she had a personal visit from Merrell's director of scientific relations, Dr. F. Joseph Murray, who some weeks earlier had made it his business to learn who was handling his company's NDA. And as the second sixty-day period drew to an end, in January, 1961, Dr. Murray wrote her asking to be informed immediately by telephone if the application was now acceptable. He reminded her that Merrell was eager to proceed with plans for its promised "early in 1961" marketing date.

Dr. Kelsey's response was a second official communication stating that the Kevadon NDA was unacceptable. She had shown the

Merrell material to her pharmacologist husband at the National Institutes -- the various divisions of the HEW Department frequently confer with one another -- and the resulting memo, from Dr. F. E. Kelsey to Dr. F. O. Kelsey, had confirmed her own opinion. Her husband had written that one section of the NDA was "an interesting collection of meaningless pseudoscientific jargon apparently intended to impress chemically unsophisticated readers." Of another section he had written, "I cannot believe this to be honest incompetence."

By then Kevadon was no longer Dr. Kelsey's sole concern. She had been assigned other work, and she had also become involved in time-consuming hearings on the drug Altafur, which the FDA had approved in July, 1959, but had found unsafe by December, 1960, and was trying to remove from the market. Its order to halt the drug's sale had been appealed by the manufacturer, and Altafur remained available to the public while the appeal was heard. FDA staff members were understandably eager to bring the hearing to a speedy and satisfactory end, and to see removed from sale a drug which some of them felt had been too hastily approved in the first place.

Consequently, when Dr. Murray tried to reach Dr. Kelsey by phone a week after the Merrell NDA was turned down for the second time, and again resubmitted, he found her unavailable. He therefore called Dr. Ralph G. Smith, director of the FDA's New Drug Division and Dr. Kelsey's superior. Dr. Murray assured Dr. Smith that Merrell's application was being held up now only because the revised labeling suggested by the company had not yet been reviewed. He hoped for its early approval. Dr. Smith promised to check into the matter.

A week later Dr. Murray called Dr. Smith again, and was told that Dr. Smith had discussed the subject with Dr. Kelsey and learned that considerable material, in addition to the new labeling, remained to be reviewed.

On the first of February Dr. Murray reached Dr. Kelsey by phone. He told her Kevadon was now scheduled for release March 6, and that Merrell wanted to begin to print its labeling. Dr. Kelsey made no promise of an early approval.

In the next two weeks there were more phone calls. Dr. Murray admitted he was under pressure from his company to get the NDA approved, and said the Merrell vice-president wanted to come to Washington to see what he could do about hastening the process.

By this time Dr. Kelsey knew she was being a thorn in Merrell's side. The realization gave her no pleasure. As a doctor and a pharmacologist she had long been aware of the value of many of the new drugs that had been produced by industry-financed research. "We see their point of view and they see ours," she said. Then she added, "But the responsibility for releasing a drug is ours, not theirs."

In the matter of Kevadon she had taken that responsibility with characteristic seriousness from the beginning. She had always felt, as she put it, that there was "something peculiar" about thalidomide. It did not put animals to sleep, for example, although it was such an effective sedative for human beings. This made her wonder whether animals and humans might not react differently to the drug on other levels as well -- whether, in fact, animal tests of the drug should be accepted as proving its safety for humans.

Another matter troubled Dr. Kelsey too. During the war years, while studying quinine in connection with a malaria project, she had proved that a fetus does not always react to a chemical substance in the same way an adult does. "The fetus or newborn may be, pharmacologically, an entirely different organism from the adult," she once explained. For that reason she was not convinced that thalidomide was harmless to a fetus, even though it seemed harmless for adults.

As time went by, Merrell's pressure on her became heavier. Phone call followed phone call; visit followed visit. Each made her more acutely aware than before that Merrell regarded her as "a bureaucratic nit picker," as someone once put it.

And then one day late in February, while reading through copies of the British Medical Journal, Dr. Kelsey came across an interesting letter to the editor in the December 31, 1960, issue. It was headed "Is Thalidomide to Blame?"

The letter had been written by an Aberdeenshire doctor who wished to know if any fellow physicians had shared his experience: Four of his patients, who had been taking thalidomide for from eighteen months to two years, had developed peripheral neuritis (a tingling numbness of hands and feet) and occasional lack of muscular coordination. He had stopped administering the drug, he wrote, and after a few months three of the patients showed a marked improvement.

Dr. Kelsey was more than interested. She was definitely disturbed. "If this drug were a cancer treatment, or helpful in really dread disease," she said afterward, explaining her attitude, "I wouldn't have worried about minor side effects."

But it wasn't. It was a sleeping pill -- one more sleeping pill to be added to an already long list of available and satisfactory sedatives.

"And I could anticipate the results of an enthusiastic sales effort," Dr. Kelsey added. "Everybody -- sick and well, old and young -- would be taking it. That's why . . . I felt I couldn't be too careful."

She promptly wrote to the Merrell Company, describing the letter she had just read and asking for further data on animal studies and clinical information. She also asked for a list of the doctors to whom the drug had been given for investigation.

And when Dr. Murray called her that same day, "to inquire about Kevadon," she told him what she had just put in her letter.

Recalling that day a few years later, when she was testifying before a Senate subcommittee about her part in the thalidomide story, Dr. Kelsey said of the Merrell staff scientists, "They said they too had read the article, and they did not consider this was very significant, as many older persons did get peripheral neuritis, and they felt it was just a chance association."

On April 19 -- with Kevadon already approved in Canada and on sale there -- Dr. Murray called Dr. Smith and told the director of the New Drug Division that Merrell felt "some pressure should be exerted." It wanted "a 'Yes' or 'No' decision," so that the company could prepare to go to a hearing if necessary. It "believed Dr. Kelsey was avoiding a decision." The vice-president of Merrell planned to call on the FDA Commissioner himself "if nothing was going to be done."

That time Dr. Kelsey did not wait for the end of a sixty-day period. On May 5 a letter went out to Merrell once more declaring its application "incomplete and inadequate." Dr. Kelsey wanted still more animal studies and more clinical information, in order to evaluate "the seriousness of neurological toxicity."

In correspondence with one of the doctors whose names she had been given, Dr. Kelsey wrote that she agreed with his statement to her that peripheral neuritis seemed to be the only side effect thalidomide caused. But she added that the FDA was not satisfied that the effect was always completely reversible, and that it might occur more frequently than the doctor himself seemed to believe.

The phone calls and visits from Merrell representatives continued. And though more data reached Dr. Kelsey's office, it was never enough to satisfy her. On July 26 she sent out her fifth letter stating that the Kevadon NDA was "regarded as withdrawn and resubmitted."

On September 7, at Merrell's urging, a conference of company representatives and clinical investigators met with Dr. Kelsey and several other FDA staff members, including Dr. Smith. A Bureau of Medicine memo on the conference reported: "The investigators presented their experience with Kevadon. This included evidence that the drug is effective, has certain advantages over other hypnotics regarding safety, does cause neurological reactions, and some evidence but not conclusive evidence that the reactions are necessarily reversible. There was only a little evidence that the drug would be harmless to the fetus if given during pregnancy, and this evidence was not adequate."

Less than a week later Dr. Kelsey's sixth letter went out declaring the application for Kevadon unacceptable. Merrell soon proposed new and more cautious labeling. Dr. Kelsey wanted more data.

Dr. Murray telephoned her, and Dr. Smith as well, urging them to predict when the NDA might be finally accepted. He said Merrell now hoped to get the drug on the market by the middle of November -- ten long months past its original target date. Neither Dr. Smith nor Dr. Kelsey could give him an optimistic answer. And on November 7, for the seventh time, Dr. Kelsey reported Merrell's application unacceptable.

Three weeks later a shaken Dr. Murray telephoned her the news he had just received a cablegram from Europe: Thalidomide was being withdrawn from the West German market because of reports that it was associated -- Dr. Murray hastened to state that he hoped the association would prove merely coincidental -- with certain congenital deformities.

That year thirteen West German babies had been born with the malformation known as phocomelia. The name, from the Greek for "seal" and "limb," is starkly descriptive: A baby with phocomelia has tiny flippers instead of arms and hands. Flippers may also replace the feet and legs.

The phocomelia cases appeared more and more frequently. University pediatric clinics alone reported 124 of them in West Germany during 1960. In that year, too, the first phocomelia babies were born in England. Some died at birth or soon afterward. But two out of three survived.

German doctors had been desperately seeking the cause of the deformities from the beginning. Heredity did not seem to be involved. The doctors concluded that "an unknown agent from the environment, affecting the embryo at some time between the third and sixth week of pregnancy, had caused the damage. During this period, when most women do not yet know they are pregnant, the embryo goes through the principal stages of development."

But what was that agent? German measles did not cause the malformations of phocomelia. Dozens of possible causes were considered and discarded, including radioactive fallout.

One doctor active in the search, the distinguished Widukind Lenz of Hamburg, sent out questionnaires to parents of deformed babies and to their physicians. He asked them to report on each mother's diet during pregnancy, and on a variety of things she might have been exposed to during that period, such as household detergents, drugs and hormones, X-rays, contraceptive devices and pregnancy tests. When he correlated their replies, he learned, among other things, that 20 percent of the mothers had taken thalidomide under its German trade name, Contergan.

Twenty was not a very high percentage, Dr. Lenz realized, but he was aware that many women might have forgotten to report the taking of so common a drug. He immediately queried all the mothers again, asking specifically about Contergan. This time half reported having taken it.

On November 15, 1961 -- a week after Dr. Kelsey had sent out her seventh not-approved letter to Merrell -- Dr. Lenz reported to the German manufacturer of Contergan that he believed it might be responsible for the sudden widespread incidence of phocomelia, and asked the company to withdraw the drug from the market.

On November 26, Contergan was withdrawn from the German market, along with all compounds containing thalidomide. Forty-eight hours later the Ministry of Health of West Germany warned the public that Contergan was the suspected cause of phocomelia. Newspapers and radio and television stations joined in urging women not to take the drug.

At almost exactly the same time a similar medical deduction had been made in Australia by Dr. W. G. McBride concerning thalidomide (under the British trade name, Distaval). His report, reaching England simultaneously with the news from Germany, caused the British manufacturer of Distaval to remove it from the market.

Dr. Murray had made his November 30 phone call to Dr. Kelsey as soon as he heard the news from Germany. But Merrell felt that the case against thalidomide was not yet proved. So, apparently, did George P. Larrick, then Commissioner of the Food and Drug Administration, and a man generally regarded as friendly to the drug industry and sympathetic to its problems. At any event he did not take matters into his own hands -- as he had the power to do -- and order the rounding up of all the Kevadon that had been distributed to American doctors. Instead he left the matter to Merrell's discretion.

On December 4, Merrell's medical director, Dr. John N. Premi, sent out a warning letter which read:

Dear Doctor,

We have received information from abroad on the occurrence of congenital malformations in the offspring of a few mothers who had taken thalidomide (marketed in Canada as Kevadon) early in their pregnancies. It is impossible at this time to determine whether, in fact, there is any causal relationship.

However, until definitive information is available to us, as a precaution we are adding the following contraindication to the use of Kevadon:

Kevadon should not be administered to pregnant women nor to premenopausal women who may become pregnant.

We are actively following this matter and you will be advised when it is finally determined whether or not this precautionary step was necessary.

The FDA staff learned only later that that letter had gone to none but the doctors who had received supplies of Kevadon during the past twelve months. These numbered only some 10 percent of all the doctors who had received the drug, inasmuch as Merrell's big Kevadon Hospital Clinical Program had been inaugurated, and exceeded its "quota," more than a year before.

Three weeks later Dr. Kelsey sent out her eighth and last letter declaring the Kevadon NDA incomplete "in the absence of data relative to the deformities of newborn babies." That time Merrell did not resubmit its application.

Kevadon was not going to be marketed in the United States. That fact was now assured, and Dr. Kelsey was responsible for it.

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Part II

But hundreds of doctors throughout the country still had Merrell's donated supplies of Kevadon on hand, and neither they nor their patients had been warned against its use. The drug thalidomide and its danger were still totally unknown to the general American public. No word at all had reached the American press by January, 1962, when Dr. Helen Taussig entered the story.

Most famous as co-developer of the blue baby operation, which has saved the lives of so many infants, Dr. Taussig had been associated with the Johns Hopkins University School of Medicine ever since she took her medical degree there in 1925. She was professor of pediatrics and her reputation as a pediatric cardiologist was worldwide.

On an evening in January, 1962, Dr. Taussig was visited by Dr. Alois Beuren of West Germany. "He told me," Dr. Taussig later explained, "that the doctors in West Germany were seeing a great number of children born with gross malformations of the extremities, little flippers instead of arms or legs, or no arms or no legs; and what was more, that Dr. Lenz thought the malformation was caused by a sleeping tablet."

By the next morning Dr. Taussig realized, as she has said, "the full implication of the situation." She promptly made up her mind that she wanted to see those deformed babies for herself.

What she saw in West Germany horrified her. What she heard made her realize how difficult it had been to trace the association between thalidomide and birth deformities -- an association that some German doctors still doubted. From Dr. Lenz she learned that out of one group of 100 women who had taken the drug during pregnancy, only two had given birth to deformed babies. To many people this might have seemed small reason to indict thalidomide. Dr. Lenz, who knew the times at which these two women had taken thalidomide, realized that only those two women had taken the drug during the brief period when it might cause deformities in the developing fetus. Therefore this report was a serious indictment indeed.

Some of the incidents he related to Dr. Taussig she found particularly conclusive. One had to do with a mother whose baby was deformed, but whose doctor swore she had not received Contergan. The doctor had prescribed, he insisted, an entirely different sedative. But when Dr. Lenz checked the records of the pharmacy that had filled the prescription, he found it stamped by the druggist: "Drug not in stock. Contergan given instead."

Before Dr. Taussig returned home, Time magazine, in its February 23 issue, had published an article entitled "Sleeping Pill Nightmare." It might have appeared earlier. The magazine's West German correspondent had alerted his New York office to the Contergan scare the previous November. Nothing had been done about it then, since thalidomide under the name of Contergan was unknown in the United States, and Time's editors believed the news would have no interest for American readers. (The whole thalidomide story has since been pointed to as an example of the need for labeling all drugs by their generic, or scientific, name, as well as by their brand name.) But when Time's medical editor realized that thalidomide was the basic ingredient of Kevadon, already being sold in Canada and offered for consideration to the United States Food and Drug Administration, he hurried the article into print.

It related the history of Contergan and its association with European birth deformities. Then it said that all Canadian doctors had been warned against the use of Kevadon the previous December, and that the drug had been used only "under heavy restrictions" in the United States where "the cautious Food and Drug Administration confined Kevadon to medical researchers for investigational use only." Consequently, the article concluded, American consumption had "been small -- though some American women travelers have brought foreign pills home in their pocketbooks."

The article also stated -- inaccurately, as events proved -- that "U.S. investigators using the drug received a warning similar to that sent to Canadian doctors."

Dr. Taussig was back in Baltimore by April 1, and there met with Dr. Kelsey. Both were in instant agreement that the American public must be warned without delay about the dangers of thalidomide. The warning must be issued, they felt, even if it protected only a single baby born to a woman who might have brought thalidomide pills home with her from Europe, or who might have been given such pills by one of Merrell's investigating doctors.

Dr. Taussig offered to do anything in her power to held the FDA protect possible sufferers from Kevadon. But Dr. Kelsey did not have the authority to accept her offer, and it was not accepted by the Food and Drug Administration itself.

Since there was therefore no way in which the two women doctors could officially coordinate their efforts, each carried on the campaign in her own way.

Dr. Kelsey asked Merrell to send her a "complete and up-to-date list of all physicians supplied with the drug," and information on what the company had done to warn those doctors against its use. When she received the list, she was appalled to discover that it contained a total of 1,267 names.

Dr. Kelsey then realized, for the first time, that only a small number of the investigating doctors had received the warning letter which Merrell had sent out in December, 1961. All the doctors had, however, been sent a latter from Merrell in March, 1962 (after the Time article appeared), asking them to cease further investigation of the drug, and to destroy or return all the Kevadon they still possessed. But when Dr. Kelsey read a copy of that letter, she was not reassured. The letter stated that, from Merrell's investigations to date, "no causal relationship between thalidomide and teratogenic defects has been established."

Dr. Kelsey informed her superiors about what she regarded as the inadequate urgency of the letter, but the FDA hierarchy still made no move on its own. It continued to leave the situation in Merrell's hands, and as later appeared, Merrell's records of the amount of Kevadon returned or destroyed were alarmingly vague.

Dr. Taussig, in the meantime, had written a brief editorial on her German experience and requested the American Medical Association to publish it immediately in its Journal, probably the most widely read of American medical publications. The editors refused. They stated that Time magazine had already reported on the possible danger of thalidomide.

The AMA Journal did publish an article by her on thalidomide in June, but before it appeared she had addressed medical meetings at every opportunity: Johns Hopkins Hospital, the University of Maryland, the American College of Physicians, and the American Pediatric Society. Late in May she was asked to testify before a subcommittee of the Judiciary Committee on Food and Drug Regulations. She agreed, provided she were permitted to show the committee members some pictures.

After presenting to them several photographs of babies deformed by phocomelia, she said, "I may not be a pharmacologist, or even a great physiologist, but I am sure that if any of you had a child or a grandchild with such malformations, you would be doing everything in your power to prevent it happening again, and that is why I am here today."

Dr. Taussig's article in the AMA Journal appeared June 30. Another article she had written for Scientific American, a magazine with a broader circulation, was ready for publication in August. But in the meantime Dr. Kelsey had been interviewed by three reporters. One got the up-to-date facts on thalidomide, but decided to hold her story for a while. ("She could have kicked herself afterward," Dr. Kelsey recalled later.) The other two were from Washington newspapers, one from the Star, the other from the Post.

It was the experienced science reporter Morton Mintz of the Post who finally gave thalidomide the great splash of publicity that both Dr. Kelsey and Dr. Taussig had hoped for. His report, headlined "HEROINE" OF FDA KEEPS BAD DRUGS OFF MARKET, and illustrated with a photograph of Dr. Kelsey, landed on the Post's July 15 front page and was picked up by the wire services for distribution all over the country.

"This is the story," it began, "of how the skepticism and stubbornness of a Government physician prevented what could have been an appalling American tragedy, the birth of hundreds, of indeed thousands of armless and legless children."

Suddenly the whole nation was thalidomide-conscious. The question immediately arose of whether doctors and hospitals or their patients still had any of the drug on hand. Not all the distributed Kevadon pills had been labeled. The possibility thus had to be faced that some people might still be given, or have in their possession, pills which they did not know to be thalidomide and which they might unwittingly take.

On August 6, President John Kennedy publicly appealed to all Americans to clear out of their medicine cabinets, and destroy, all unidentified pills.

On August 23, a report on the FDA's "search and destroy" mission revealed that a total of over 2,500,000 thalidomide pills, and "lesser quantities of liquids and powders containing the drug," had been distributed by Merrell. The FDA itself had recovered more than 25,000 unlabeled pills from 79 physicians, and by then had interviewed 1,168 of the 1,267 investigating doctors -- some of whom had moved since receiving the drug, and others of whom had died.

"More than 50 percent had no record of the quantities returned or destroyed," the report said. Most of the doctors said they had received Merrell's March letter advising them to stop using the drug, but 42 claimed they had been given no such warning.

In spite of everything Dr. Kelsey and Dr. Taussig had been able to do, some deformed babies were born in the United States. In ten cases, proof existed that the mothers had been given the drug by their doctor or hospital, and taken it during those critical early weeks of pregnancy. In seven other cases the mothers were known to have obtained thalidomide abroad. In the remaining nine cases no proof could be established that the mother had taken thalidomide at the critical time. One woman, who knew she had taken it early in her pregnancy, tried to obtain an abortion on that ground, but was unable to do so in the United States. She flew to Sweden, where she was aborted of a deformed fetus.

The thalidomide story is credited with having rescued from oblivion the so-called Kefauver-Harris Drug Amendments, which had apparently been permanently buried only a few weeks before the story broke. Shortly after the whole country had been aroused by that story, the amendments were passed. Since 1962, therefore, the public has been protected by various new regulations. One of them gives the FDA stronger controls over such investigational procedures as Merrell's Kevadon Hospital Clinical Program. Now, for example, when a doctor gives a patient a new and still-unapproved drug, as part of an investigatory program, he must tell the patient that he is doing so.

The thalidomide story has also been credited with spurring a more determined study of the possible effects of all drugs on the fetus. And it has given rise to warnings which may have saved immeasurable suffering. Dr. Taussig repeated one of them at every opportunity: "Women of childbearing age should avoid drugs as much as possible, particularly new ones."

Her role in the thalidomide story added to her already wide renown. In 1964 the Medal of Freedom, bestowed on her by President Lyndon Johnson, was added to the long list of awards she had already received.

The President's Award for Distinguished Federal Civilian Service came earlier to Dr. Kelsey, who would soon be named director of the FDA's Division of Scientific Investigations. It was given to her by President Kennedy in 1962. Senator Kefauver, who proposed her for it, wrote the President that "her contribution flows from a rare combination of factors: a knowledge of medicine, a knowledge of pharmacology, a keen intellect, an inquiring mind, the imagination to connect apparently isolated bits of information, and the strength of character to resist strong pressures."

Neither of the two doctors had done what they did in the hope of winning awards. Dr. Kelsey's pleasure in her medal from the President's hand was perhaps no greater than her delight in a tiny scrap of rug, barely big enough to rest both feet on, given to her by her colleagues after they had read newspaper accounts of the FDA heroine's uncarpeted office.

Dr. Kelsey and Dr. Taussig did what they did because they knew that -- as Edmond Cahn wrote in his Drugs in Our Society -- "So many did not really care, did not even want to know what the new drugs might cost in terms of human injuries and fatalities."

Dr. Taussig and Dr. Kelsey did care. They did want to know. They went on caring and wanting to know when the dramatic story of thalidomide had ended.

"The worst did not happen," Dr. Kelsey said matter-of-factly then. "Now let's go on and see what we can learn."

Connections:

Living in the 1980s, we know the results of thalidomide on the human body and have come to views Drs. Kelsey and Taussig as heroines. But what must concern us all in this account is the ways in which knowledgeable people can influence decision-making. This case demonstrates how important decisions are often made by people with a private interest in them, or by people not elected to make them. Interest groups and citizen lobbies, which in reading were seen to have a beneficial effect on society, in this case seem less benign.

The case has been divided into two parts -- the governmental concerns and public relations -- so that classes with less time may consider only the first half. For both sections, however, it may be useful to consider all the steps the doctors and lobbyists took to advance their positions. Which step(s) seem to be the most significant? We often think of endurance in physical terms. How is emotional endurance seen in this case? How can this case be compared to "Saving a Forest"?

A very important issue for students is what can be learned from this case. How can citizens sort out which lobbies they support and which they question or oppose? At what point, if ever, do they feel sufficiently knowledgeable about a public issue to take a stand? What do they think about Dr. Kelsey's and Dr. Taussig's tactics in making their points? Would one have been successful without the other?

Activity 12: "Dr. Louis Slotin"

Louis Slotin was an atomic physicist at a pivotal time in nuclear physics research when scientists were switching from manual to robot-controlled work with radioactive materials. Slotin, an individual who made a choice in favor of one method of research, became a model for the individual responsibility of research scientists in their laboratories.

THE STRANGE DEATH OF LOUIS SLOTIN

(Adapted from a story by
Steward Alsop and Ralph E. Lapp,
printed in Courage)

Dr. Louis Slotin, a young and brilliant atomic scientist, began to die at precisely twenty minutes past three o'clock, on the afternoon of May 21, 1946. The story of how he began to die, and of what happened afterward -- which can only now be fully told -- is in some ways a rather horrible story. Yet, if only because it helps strip the mystery from the most terrifying effect of atomic weapons -- the invisible killer, nuclear radiation -- Louis Slotin's story is worth telling all the same.

The place where Louis Slotin began to die was a laboratory in a canyon near Los Alamos, the war-built town in New Mexico where the world's first atomic bomb was made. Visualize a large, oblong, white-painted room, unfurnished except for a metal desk near the center, and a table against one wall, bearing the complicated equipment of the atom-bomb-maker's trade. The spring sunshine floods obliquely through the single large window. There are eight people in the room. Their silence is broken only by the staccato clicking of a Geiger counter, as all attention is focused on a short figure standing over the metal desk.

This is Louis Slotin, thirty-four years old, five feet six inches in height, slender, wiry, his face heavily bronzed by the New Mexico sun, his black hair already graying a little at the temples. Through thick, horn-rimmed spectacles -- which betray the scientist and the intellectual, despite his cowboy boots -- he is peering intently at certain objects on the desk.

These are two hollow, silvery-gray half globes of metal, which Slotin is deliberately manipulating closer to each other, using an ordinary screw driver as a lever. These hunks of metal are the guts of an atomic bomb.

Standing behind Slotin is a fellow scientist -- Scientist X, we shall call him. Scientist X has his hand resting casually on Slotin's shoulder, and he is leaning forward with intense interest -- he has never seen this experiment before.

The six other people in the room are laboratory assistants, and technicians. The scene is a casual one. Slotin himself appears confident, almost gay. He loves this experiment -- "tickling the dragon's tail," he calls it -- and he has already performed it at least forty times. Even so, there is a certain tension in the room. Those present are aware that manipulating the guts of an atomic bomb is no child's play.

Slotin has his ear cocked to the click of the Geiger counter, and he also glances frequently at an instrument called a "neutron monitor," which is recording on a roll of paper, in a thin, wavy line of red ink, the radiation emitted by the lumps of metal. As Slotin slowly moves the lumps, the red line staggers upward and the Geiger counter clicks erratically, always a little faster, like a deranged clock.

Suddenly the Geiger counter begins to click insanely, and then stops dead. All in a moment, the people in the room sense rather than see a strange blue glow, stronger than the spring sunlight. Instantly, Slotin throws himself forward, thrusting the half globes of deadly metal apart with his naked hands. Then he stands up, his face a chalky white beneath the tan.

In a concerted, instinctive, almost somnambulistic movement, the eight people file quickly from the room, without speaking. Some of them are aware of a dry, prickly, sour sensation on their tongues -- a sign of excessive radiation. Some of them are no doubt also aware of a little flicker of fear in their hearts. Yet aside from the sour taste, they feel nothing else at all -- not even Louis Slotin, who has already begun to die.

To understand what happened, and why, and what it means, it is necessary to know something about Louis Slotin, and the reason he tickled the dragon's tail. The bare facts of Slotin's thirty-four years can be quickly recited.

He was born, Louis Alexander Slotin, in 1912, of prosperous Jewish parents in Winnipeg, Canada. At the tender age of fifteen, he entered Winnipeg's University of Manitoba, and received his master-of-science degree at the equally tender age of twenty-one. He studied physics for four years at the University of London, and got his Ph.D. in 1936. In 1937 he went to work for nothing a week -- a salary for which he worked for almost two years -- as an assistant for cyclotron work.

His work at the University of Chicago led him directly into the Manhattan District, the supersecret wartime atomic project. He worked for a time in Chicago, then at Indiana University, and later at Oak Ridge. In late 1943, Slotin came to Los Alamos, when the job of actually putting the atomic bomb together was started, and there he began to tickle the dragon's tail.

So much for the bare facts. The bare facts, of course, do not answer the question: What kind of man was Louis Alexander Slotin?

"No man," John Donne wrote, "is an island unto himself." Yet Louis Slotin was more nearly an island unto himself than most men. He was extraordinarily reserved. "Louis was a sweet kind of guy," one of his former colleagues has remarked, "but no one ever got to know him really well."

Even so, certain well-marked characteristics of the man emerge through the mists of time. In the first place, Slotin was a brave man -- but brave in an odd sort of way. "Slotin had a positive hankering for danger," another of those who knew him says. "He seemed to be suffering from some sort of inner tension, and he was always very quiet. But he was downright gay when he was doing something dangerous."

The experiment of tickling the dragon's tail, it must be understood, was not a kind of scientific Russian roulette which Slotin and the other young physicists at Los Alamos thought up to relieve their boredom. It was a vitally important experiment, absolutely essential to the bomb-making process -- and indeed, it is still essential today.

Fissionable material -- uranium 235 and plutonium -- is queer stuff. Below a certain size and weight, a lump of this very heavy, greasy-gray metal is no more dangerous than a lump of lead. But it has one special characteristic which may one day destroy civilization as we know it. For if a certain amount of this metal is brought together all in one place, a chain reaction starts within the mass of metal. It is the chain reaction, of course, which lends to the atomic bomb the power to blast and sear a whole city. The amount of the metal required for the chain reaction to start is called a "critical mass" -- a "crit," to use the physicists' shorthand.

But how much is a crit? There were and are ways of calculating theoretically the amount of fissionable material required to form a critical mass. But such calculations can never be wholly precise. Moreover, in order to achieve "optimum efficiency" -- in other words, "killing power" -- in an atomic bomb, the size of the crit had to be determined -- and still must -- under various conditions.

Even today, for reasons of security, it is necessary to be a little imprecise about the experiment which Louis Slotin performed that May day in 1946 -- and which his successors are still performing under very different conditions. But it can be said, accurately though unscientifically, that the idea was to shove together lumps of fissionable material in such quantities, and in such a geometric relationship to each other, that the whole amount just went critical. In other words, a chain reaction was permitted to begin -- thus establishing the crit -- but it was stopped before the material became dangerously over-critical. The problem, of course, was to know when to stop.

No one at Los Alamos had any illusions about the danger involved. There was, to be sure, no danger that Los Alamos might be blown off the face of the map if something went wrong. In order to generate true explosive power, the critical mass must somehow be held together by an outside force -- this is called "maintaining assembly." Otherwise the power of the chain reaction automatically "disassembles the crit." In the meantime, however, if a true chain reaction is permitted really to get under way, the critical mass of fissionable material becomes briefly but intensely radioactive. It sends out precisely the same lethal radioactive rays as an atomic bomb does when it explodes over a city.

Slotin particularly had good reason to be aware of this danger. Before the day when Slotin tickled the dragon's tail for the last time, at least three people at Los Alamos had fallen victim to the invisible killer. One of these was Slotin's friend and laboratory assistant, Harry Daglian. Slotin spent many hours at his assistant's bedside during the month that it took Daglian to die.

Particularly after Daglian died, those in authority at Los Alamos worried about the radiation danger. One Nobel Prize winner told Slotin, "I predict you won't last a year if you keep on doing that experiment." But Slotin happily carried on.

"Sure, it's dangerous," Slotin remarked to one colleague, "but it has to be that way." One suspects that Slotin, perhaps unconsciously, wanted it to be that way.

Ironically, on May 21, 1946, Slotin was performing his beloved experiment for what he knew to be the last time. For more than two years he had performed the experiment again and again in different ways and under various conditions. He was particularly proud of the fact that he had been chosen to test the criticality of the world's first atomic bomb -- he cherished the receipt for this bomb which he got when he returned it to be exploded at Alamogordo, after having tickled its tail. Now he had been ordered to Bikini, to participate in the bomb tests there. He was eager to be off -- when final orders came to perform the experiment just once more for the benefit of Scientist X. So Slotin tickled the dragon's tail just once more -- and the dragon lashed back to destroy him.

What went wrong? Part of the answer may no doubt be found in Slotin's hankering for danger -- such a man may always be tempted to go too far. But part of the answer is also certainly found in the fact that Slotin, at the age of thirty-four, was already an old-fashioned scientist.

Slotin received his whole training as a physicist in the '30s, before the time when national survival depended on the special skills of his kind. It was quite typical of those days that a brilliantly qualified physicist like Slotin should work for nothing a year. In the '30s physicists led a hand-to-mouth existence, dependent for their equipment, their experiments and their livelihood, not on an anxious and munificent Government, but on the sometimes capricious generosity of a few great universities.

In those years physicists learned to perform their experiments with whatever came to hand -- even an ordinary screw driver. This cavalier attitude carried over into the well-financed period of the Manhattan District, and men like Slotin had a certain pride in their own casual approach to the great and mysterious forces locked up in matter. After Daglian died, for example, a rather simple spring-actuated safety device was designed, to push the lumps of fissionable material apart as soon as they threatened to become dangerously radioactive.

Slotin would have none of it. He had, he said, proudly, "a feeling for the experiment," and besides, he argued, such devices would cause accidents rather than prevent them -- the experimenter would come to rely on the safety devices rather than on his own judgment.

There is no doubt about what happened that day in May or about when it happened. The record of the neutron monitor which

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Slotin used has been preserved. A thin red-ink line mounts gradually across the paper, showing the amount of radiation emitted by the lumps of metal at each given moment. At precisely 3:20 p.m., the line simply disappears. At this precise point the radiation became so intense that the instrument was forced right off scale.

As for why it happened, no one, not even Slotin himself, was entirely sure. The experiment was almost finished -- it was a matter of manipulating one last piece of metal an eighth of an inch from the rest of the assembly. "When the point of criticality was almost reached," one of those present writes, "the piece somehow slipped and the gap was closed." The "somehow" is still unexplained. But the best explanation combines the overconfidence of an over-brave man with Slotin's casual use of an ordinary screw driver to lever the deadly hunks of metal. In a word, the screw driver slipped.

At any rate, Slotin knew instantly what had happened, and his reaction was instantaneous. When he lunged forward and pulled the chunks of metal apart, he "disassembled the critical mass." If he had not done so, if he had instantly ducked away from the table, he might conceivably have saved himself. It is far more probable that he would have condemned others in the room to death.

"It is unquestionably true," Scientist X has written, "that I and perhaps others of those present owe our lives to his action. I do not know whether this is heroism or not. I suspect that Louis would have objected to such a term."

Within an hour of the accident, all the eight people in the laboratory were taken to the Los Alamos hospital --a temporary, wartime, shack-like, wooden structure -- and placed under close observation. Other than Scientist X, the man who had been closest to Slotin was an unmarried, fifty-four-year-old technician, who was standing about six feet in front of the metal desk. He was kept in the hospital for two weeks, and he showed certain symptoms of radiation injury, including measurable radio-sodium and radiophosphorus in his urine. But he felt quite well -- and six weeks later this man, who was something of an athlete, was happily hiking six miles in one day without ill effect.

Others who were standing somewhat farther away had even less reason to complain, although everyone in the room had taken a dose of radiation. So much nonsense has been spread abroad about the silent nuclear killer that many people have come to feel that it is absolutely lethal at almost any range. Actually, the athletic technician took a dose of about 100 roentgens, according to later calculations -- the same dose he would have taken if he had been wholly exposed to the radiation effect of a modern, 100-kiloton atom bomb exploding at a distance of 6500 feet.

Despite the technician's rapid and complete recovery, a dose of 100 roentgens is no laughing matter. If Slotin had not reacted so quickly, if the technician had been exposed a little longer, the technician would certainly have suffered as Scientist X suffered -- and he might well have died.

Scientist X, remember, was standing with his hand on Louis Slotin's shoulder, watching intently the experiment which he himself would have to perform later, when the accident happened. According to later calculations, he took a dose of about 180 roentgens; this is in the danger area. It is the same dose he would have taken if he had been about 6000 feet from a modern atomic bomb, only a few hundred feet less than the athletic technician. Where nuclear radiation is concerned, short distances can make an enormous difference.

A courageous and unexcitable man by nature, Scientist X was calm and made no complaints when he was admitted to the hospital. Shortly after being admitted, he vomited once. The feeling of nausea passed away in about ten hours, leaving Scientist X feeling weak and tired, with little appetite, but otherwise well enough. He continued thus for about five days. On the fifth day the delayed effect of the gamma rays on his cell tissue began to make itself felt. His temperature climbed close to 103 degrees, and two blood transfusions were required. For some time he felt terribly drowsy and higly irritable, but his temperature fell gradually, and after the fifteenth day he was well enough to be sent home to rest.

But the gamma rays were not yet through with him. He had lost ten pounds, and for some weeks he tired very easily, and spent upward of sixteen hours in bed each day. The skin on his left temple and on the left side of his head -- which had been most exposed -- began to feel sensitive. On the twentieth day Scientist X was combing his hair, and found large tufts coming out in the comb. He also became temporarily sterile, according to the AEC report on the case -- a normal and expected symptom of radiation damage. But the point to emphasize is that such symptoms were wholly temporary.

The only permanent aftereffect which Scientist X has suffered is a moderate radiation cataract in the left eye, which reduces his vision from 20/20 to 20/40. The fact that he has suffered no other ill effect is underscored by his brilliant subsequent contributions to our atomic-energy program, notably in the development of the most terrible of weapons, the hydrogen bomb.

In short, a man can survive even a vicious attack by the silent radiation killer on his living cell tissue. But Scientist X unquestionably had a close brush with death. Of Louis Slotin, to whom, as he says, he owes his life, Scientist X has written:

"I can perhaps tell you as much about his personality and character as I could in very many words if I merely quote to you his first statement to me when we were alone together in a hospital room. He said, 'I'm sorry I got you into this. I am afraid I have less than a fifty-fifty chance of living. I hope you have better than that.' My own estimate of our chances coincided pretty well with his. I felt I had a pretty good chance. I only hoped he had."

For some days there seemed reason for hope. Slotin vomited twice before he got to the hospital, and in the first twelve hours thereafter he continued to vomit repeatedly. But he, too, like Scientist X, recovered from his initial nausea, and his only other immediate general symptoms were a slight temperature and feeling of tiredness.

His hands, of course, had taken a terrible dose, since he had used them to shove the metal apart and break the chain reaction. Within three hours Slotin's left hand became very red, swollen and bluish under the nails. Twenty-eight hours after the accident this hand began to blister painfully, and the symptoms spread to his right hand and both arms. From this time on, both arms were packed in ice, to reduce the swelling and the pain. His lower abdomen also became red and tender, and this spread gradually and became more intense.

On the fifth day of his hospitalization, Anna May Dickey, then a nurse in the Los Alamos hospital, took Slotin's blood count. When she looked at the results, she began to weep. She knew the meaning of the sudden, precipitous fall in the leucocyte, or whitebloodcell, count. The silent killer was at work on Louis Slotin's blood, and the lifesaving white blood cells were failing to reproduce themselves.

On this same day Slotin's pulse rate rose very rapidly. Thereafter he could eat nothing, and visibly lost weight. On the seventh day his mind began to fail, and he had long periods of mental confusion, in which he could not recognize his parents or colleagues. Gradually, he sank into a coma. Early in the morning of the ninth day, May 30, 1946, Louis Slotin quietly died.

Slotin's parents offered a last sacrifice to the cause of science, when they permitted an autopsy to be performed on his body, although this was against the tenets of their religion. It was later estimated, according to the Atomic Energy Commission's recently declassified report on his case, that Slotin had taken about 880 roentgens of nuclear radiation. This was as though he had been fully exposed to the explosion of a modern atomic bomb at a distance of 4800 feet. Nothing could have saved him.

Louis Slotin was not a great or famous man, and he has been in his grave now for almost eight years. Yet his story has seemed worth telling, and not only because nuclear radiation, which kills without being seen or felt, is more terrifying than need be, just because it is so mysterious. It has seemed worth telling also because it is a story of human bravery and sacrifice, qualities which may yet save a civilization threatened with destruction by the very weapons Louis Slotin helped to make.

Connections:

Slotin is portrayed as a modern-day cowboy in this short story by Alsop and Lapp. Students have been disturbed by his cavalier attitude in face of the awesome power of the atom, and at the same time drawn to his self sacrifice. Exploring these contradictory feelings in a journal entry may be helpful to them as they sort out their thoughts. How does Slotin make them feel? What may have been his motivations? What do they think of his actions? Are there times when they have tinkered with something and have been oblivious to the results until it was too late?

As students think through this action, they may wish to explore the differences between bravado and courage. Bravado implies an absence of clear motivation and aim. Many people make statements -- in either words or deeds -- for which they die and which, in the end, do nothing to bring about the desired aim. Are such actions defensable? Useful, if only to the actor?

An interesting sidelight to this story concerns its accuracy. Alsop, an investigative reporter, got wind of Slotin's death and tried to research the topic. But his questioning occurred at the beginning of the Cold War with its deep suspicion of anything Communist and with its cloak of secrecy on defense matters. Hence, Alsop did not receive altogether accurate information, and those errors are reflected in the text.

According to Joan Hinton, a scientist who was at Los Alamos, Slotin was not the daring character portrayed in this piece, but a committed humanitarian and scientist. In 1946, there was a serious debate within the scientific community about whether human or machine "arms" would be safer and more accurate in doing these measurements. Slotin's actions were approved of and engaged in by many of his scientific colleagues. Moreover, the process of "tickling the dragon's tail" was not accurately described.

Finally, Slotin's background was glossed over. He had fought on the Republican side in the Spanish Civil War and his sympathy to socialist causes made him suspect during the war. But his know-how was valued and after the war, Hinton maintains, there was an effort to hush-up Slotin's background to avoid suggestions of any collaboration with the Communists.

Another point raised by the Slotin story concerns taking responsibility for the uses of technology. Experimentation in and maintenance of many technologies require a certain degree of risk by the participants -- mining uranium, maintaining nuclear power plants, being human guinea pigs for new drugs. What are the possible motivations of people who are involved in such projects? What safeguards should be maintained for the participants' safety? What role, if any, should governmental agencies take in defining and policing adherence to safety standards?

Activity 13: A Nuclear Physicist Says "No"

Joan Hinton, as a young woman, was intrigued by science and set her sights on becoming a physicist. In graduate school during the Manhattan Project, she was tapped to become what she called a "baby scientist" at Los Alamos where the first nuclear weapon was developed. The following letter details why she left scientific research forever:

San Pian Animal Husbandry
Breeding Farm
Shensi, China
June 4, 1951

Dear Mr. Wolfe and the FAS,

Yesterday I received your application for re-membership in the Federation of Scientists. As I am now almost directly under your feet, in Suiyan Province Inner Mongolia -- where it takes two weeks for mail to arrive by donkey from the nearest railroad -- I must say I was rather surprised and pleased to receive your application, and in two months time at that!

You asked, "What has happened to you since you were an FAS member?" As it was just the FAS and the questions with which it deals that drove me to China, I thought I would take this opportunity to write to you, though I should have told you long ago why my dues stopped coming.

As you probably do not remember me, let me begin by telling you a bit of my history. From as early as I can remember I was determined to become a scientist. Even in grammar school. I can especially remember forcing the teachers to let me study Faraday's The Candle instead of taking Latin. In high school I concentrated on chemistry, oblivious to all my other courses. Finally, in college, I settled on physics, building a Wilson Cloud Chamber in my sophomore year and spending as much time as I could getting in the way of the cyclotron boys at Cornell. From college I went to Wisconsin where I studied as a graduate student for two years. As people became more and more scarce, disappearing into secret places, I became restless too, and finally ended up at Los Alamos where I worked another two years on the "W.B."

Then came the bomb and Hiroshima, and the mass migration of atomic scientists to Washington. I first joined the Association of Los Alamos Scientists, and then spent some six weeks in Washington working for the FAS. From Washington I went to Chicago as an assistant in the Institute for Nuclear Studies, and later as a Fellow. By 1948 I had about one more year to go for my degree in Physics. I could not have dreamed of a better opportunity for studying -- I loved it! I was just beginning to get the feel of quantum mechanics, as though it were a part of me instead of something strange you read about in text books. I was devouring Dirac and what I could get hold of on statistical mechanics. Yet the better things became for me in physics, the more depressed I became. Ever since the morning when we sat on a hillock south of Albuquerque and felt the heat of that bomb 25 miles away, something started to stir in me. It forced me to Washington. Then I forced it down and left for Chicago. But it refused to stay down. The Truman Doctrine, the Marshall Plan, the stagnation of the Atomic Energy Commission in the UN -- how could one just sit still in a laboratory and ponder in the depths of statistical mechanics?

The memory of Hiroshima -- 150,000 lives; one, two, three, four, five, six . . . one hundred and fifty thousand -- each a living, thinking, human being with hopes, desires, failures and successes, a life of his or her own -- all gone. And I had held that bomb in my hand. Could I sit and ponder Dirac? What was science for? For the sake of Science? That is what I had thought before. But we all pondered Dirac and then suddenly 150,000 people were killed. Were we to blame? We were only studying science, finding out how the world was put together. Was the government to blame -- really? Do we not have any say as to what our life work is to be used for? Are we puppets or human beings? Can we not envision the world of tomorrow? Will it be a world of destruction and misery, agonizing death by radiation, or will it be a world where mountains are moved by atomic bombs to change the course of rivers and make rich green farmland out of deserts? Where is our imagination?

By 1948 I could not stand it any longer. My friends all seemed to be going back into secret work. Were they crazy? Were we who studied physics all to spend our lives thinking up means of mass extermination? Even my fellowship money came from the Navy. We were doing non-secret work at the time. I needed some deuterium for our accelleration. In the room where I studied there was only a little space in the corner for a desk. The rest of the room was piled with cases of heavy water right up to the ceiling -- for the Argon (sic). We asked for some. Nowhere in America could we get any. Finally we sent to Norway and two little bottles were sent back to us with a picture of a Viking ship and a note saying, "I thought you had civilian control."

In Washington a friend of mine had asked me to go to China. I had refused. I was determined to become a physicist. But the idea kept gnawing at me. It would not let me go until finally I felt like I was being caught in a horrible trap. No matter where you turned you were faced by war, secret work, the Navy and the Army and the madmen locked in their laboratories thinking up new and better methods of total destruction. Suddenly I made up my mind and left. But it was not easy. The love of science and physics was pretty strong. Of all my notebooks and books I only had room for two in my trunk. I sat for a long time looking at those books, then took Joos, and a handbook of physics and chemistry, and set out for China with a terrible emptiness in my heart. I had broken away because I had to. I had to find out what was going on in the world outside of physics. What was happening to the peoples of the world. So I came to China to see America from the outside and to understand the tremendous upheaval going on inside Asia.

Joan Hinton

Connections:

Joan Hinton's actions merit discussion for a number of reasons. She, in effect, acted by not acting -- a different form of personal response. Students may wish to explore times when refusing to take part in an action, and even removing themselves from discussion, seemed like a more reasonable and effective alternative than continuing the dialogue or participation in a process. When is "dropping out" a better response?

Hinton's position is valuable to explore for other reasons, as well. Her personal sacrifice in the decision was enormous. She was studying to earn a doctorate in physics at a time when there were virtually no women in the field. And, in moving to China, she had to give up science entirely or she might have been accused of passing nuclear secrets to the Soviets and been denied permission to ever return to the United States.

A videotape of Joan Hinton talking to a high school class is available from the authors of Decision Making in a Nuclear Age.

Activity 14: A film -- Joseph Schultz

Connections:

The theme which emerges from the Joan Hinton letter, of refusing to participate in certain activities, links up with the issue of refusing to follow orders, as seen in the film Joseph Schultz. Schultz, a German soldier during World War II, refuses to participate in the firing squad executing Yugoslav peasants. Because this is a wartime situation, the confrontation between the individual and the group is all the more intense. Some of the concepts raised in this film concern the relationship between the individual and the group, the role of personal sacrifice, patriotism vs. blind loyalty, and individual courage. In examining the reasons for Joseph Schultz's giving up his life, students may recall times when they did the unpopular, but "right" thing according to their sense of morality. Students may wish to re-read their journal entries on Andy Listor and Drummer Hoff.

Activity 15: A film -- Interviews with My Lai Veterans

Connections:

In this 20-minute film, five veterans of the famous search-and-destroy mission in Vietnam recall in an unemotional way what they remember happening. They do not defend their taking part in the killings, yet none opposed the mission. "We felt this had been happening many times before," is the general point of view.

Students may recall the Vietnamese war poetry studied in connection with patriotism and the exercises they did in connection with propaganda. How did the soldiers' experiences in Vietnam help them to dehumanize the Vietnamese people? How did they participate in the massacre? Actively? Passively? What were their feelings?

Activity 16: The Nuclear Freeze Movement

How effective can one person's actions be in influencing public policy? Not much, we may feel, as we look at ourselves. Each of us is, after all, but one out of more than 200,000,000 citizens of the United States. And very few of us has either the personal stature or position of power of a Slotin or Hinton or Kelsey. But the growing success of the nuclear freeze movement suggests that individuals banding together can put pressure on elected officials to respond to constituents' opinions. (For information about the freeze, contact Council for a Nuclear Weapons Freeze, or American Friends.)

HEADLINES:

"Push for N-arms freeze gets support in Congress," Boston Globe, March 28, 1982

"House Takes Up Nuclear Freeze and Rival Plan Reagan Supports," New York Times, August 6, 1982

"House rejects nuclear freeze - Reagan's measure backing arms-cut talks passes by two votes," Boston Globe, August 6, 1982

"Wisconsin voters endorse a nuclear-arms freeze," Boston Globe, September 15, 1982

"Against the Freeze Referendums," New York Times editorial, October 24, 1982

"Arms plans face Congressional test," Boston Globe, January 1983

"30% boost in nuclear arms," Boston Globe, February 2, 1983

Connections:

As students examine the headlines, they may wonder whether the nuclear freeze movement has supporters on Capitol Hill. What percentage of the voters back a "freeze"? Why did the House of Representatives turn the freeze down? How did Congressional votes on the freeze in August affect the re-election of legislators in November? The headlines demonstrate that there is no clear-cut answer to how voter concern affects politicians' voting records.

Students may wish to explore in more detail how the "Freeze" referenda work. If the vote is non-binding and statewide, how would a vote affect a representative from a particular district? Is there any evidence that non-binding referenda are having an effect on Capitol Hill?

The following letter (activity 17) from Congressman Barney Frank (D-Mass.) illustrates one effect of the freeze movement. When Frank was first elected in November 1980, he opposed the MX-missile. But with his constituency overwhelmingly "pro-freeze," Frank developed a strong "pro-freeze" position himself and has become an important spokesperson if turning anti-nuclear sentiment into "no" votes on specific nuclear arms appropriations. His increasingly vocal opposition to nuclear arms provides an opportunity for students to consider whether representatives should vote the will of their constituents, or speak out against that opinion if they disagree with those whom they represent.

Perhaps a representative could be invited in to debate this.

Activity 17: A letter from a Congressman to his constituents

Congress of the United States
House of Representatives
Washington, D.C. 20515

July 14, 1982

Dear Friend:

Because of your interest in efforts to reverse the nuclear arms race that now threatens us all, I am writing to discuss what the House has done in this area so far this year and what our agenda must be for the rest of the year. There is one encouraging development -- the progress of the nuclear freeze drive. The broad public support which has rallied behind the movement for a nuclear freeze as a first step to serious arms reduction has had an impact in Washington. The House Committee on Foreign Affairs last month approved a resolution calling for a mutual nuclear freeze, with many former opponents of the move switching to vote for it.

But there have also been several discouraging developments for those of us who oppose the current arms race. Most seriously, the budget adopted by Congress this year continues to provide for a recklessly excessive rate of military spending. The 16% military increase voted by Congress guarantees a continuation of an all-out arms race, and calls for continued development and deployment of destabilizing new weapons. And this vast increase of tens of billions of dollars for the military is economically harmful as well.

This combination of events -- support in the House for the nuclear freeze coupled with majority votes in favor of more money to fuel the arms race -- underlines one important current problem. Namely, because of the public support that has been manifested for the nuclear freeze, some politicians are seeking to straddle the issue of the nuclear arms race. That is, some members of Congress have signed onto the nuclear freeze, but continue to support dangerously increased Pentagon spending, hoping that their support for the freeze will provide "cover" for their pro-arms votes. It is precisely this phenomenon which Helen Caldicott warned against in a recent letter to The Boston Globe.

This is not to suggest that support for the freeze is unimportant. It does mean that those of us who support the freeze as a necessary first step to substantial nuclear disarmament must insist that Members of Congress show their concern by voting not simply for the freeze, but against the Neutron bomb, the MX, the B-1 and other new, destabilizing weapons.

The public is now ahead of the majority of elected officials in understanding that we need genuine arms reduction. I hope my colleagues will appreciate this public sentiment and join with me and others this year to stop financing this disastrous nuclear arms competition. If not -- if a majority try to get by by giving lip service to the freeze, while voting for a budget which makes a mockery of the principles on which the freeze is based -- then the public will have to take remedial action in November.

Barney Frank

Activity 18: Some films about social activists

The Inheritance, Parts I and II
With Babies and Banners
Martin Luther King: From Montgomery to Memphis

Connections:

The Inheritance and With Babies and Banners are two hour-length films which use documentary footage to capture the grievances and protest of labor in this country. The latter shows the important contribution of women in making the General Motors strike at River Range in the 1930s a success. The former connects the use of cheap immigrant labor to the growth of the garment workers' union. They both, like Martin Luther King: From Montgomery to Memphis -- which captures many of the struggles of the American civil rights movement -- portray the initial sense of powerlessness felt by the protagonists, their commitment to their cause despite obstacles, the use of violence, and, finally, their victories.

An important theme which runs through all three films -- as well as through this curriculum -- is the struggle for individuals to join the movement when other concerns motivate them. As one worker says in The Inheritance, "It's okay for them. They're girls. I got a family to support." The risks these activists took, their reasoning, and tactics, all bear heavily on any consideration of social action.

Activity 19: Views of some workers in the defense industry

Individual responsibility can also be seen as accepting the government's decision with grace, a sense of patriotism, as this article about engineers working on nuclear weapons describes. As you read the article, consider their reasons for agreeing to work on missiles, etc. How might these engineers view people who refused to accept Department of Defense contracts? How does the reasoning compare to activists in union and civil rights struggles?

"Making a living vs. living with self

Nuclear job source of pride for some; for others, source of pain"

(adapted from Boston Globe, article, Dec. 5, 1982)

For the growing legion of workers in Massachusetts who design or build nuclear weapons, the arms race is not just a political issue -- it is an essential part of daily life.

The nuclear weapons industry absorbs their creative energy, makes or breaks their careers, pays their heating bills, buys their houses, and sends their children to college.

For some, the work is also a source of pride.

For others, it is a source of agony.

Interviews with a sampling of area engineers, scientists and executives working in defense-related industries indicate that some working on nuclear weapons are living out a commitment to patriotism and national defense.

"Those of us in for a long time understand that what we're doing is very necessary for the security of the country," said John Mutty, marketing manager for military satellite communications for Raytheon Co.

Some treat defense work as just a job -- one that is likely to pay well, but that carries the insecurity of cyclical booms and busts.

For others, nuclear weapons and the disarmament movement have provoked profound personal conflict.

"We people, from our profession, have to demonstrate, to move toward things that are helpful and healing and not damaging," said Thomas Forman, 63, of Dover, a mechanical engineer working on the MX missile.

. . . "You have to separate the work you do from what you are as a person," Forman said.

. . . Other area engineers and scientists, many of whom did not attend the conference (of High Technology Professionals for Peace), expressed the same conflict between economic necessity and personal morality, a conflict they seldom discuss at work or with colleagues.

Most, in fact, said they think the majority of their co-workers do not think about the deeper questions. Most asked not to be identified, worried that if their colleagues and supervisors knew of their doubts, they might be viewed as disloyal or untrustworthy.

. . . A middle-aged executive with a major defense contractor said . . . that he, too, would much prefer to work on peaceful projects, but said he also believes a nuclear deterrent is necessary.

"I don't need a guilt trip laid on me because I enjoy what I am doing and I do it well," the executive said, his voice thickening with emotion. "I contribute to carrying out to sea nuclear missiles. All I can say is I vote against that sort of thing in the voting booth."

Among those who had misgivings about the nuclear arms race, many defense workers said they did not feel personally responsible for the weapons. Like the middle-aged executive, they said they thought decisions to build weapons are the moral responsibility of the elected political representatives who vote for them, not of the workers hired to carry out their decisions.

Said one physicist who works on the MX missile system for General Telephone and Electronics Corp., but personally does not approve of it: "The grocer who neglects to vote because he's too busy in his store to exercise his political clout is much more morally responsible or at fault than I am."

This man said he has found a personal resolution in separating his life into "two selves": his "working level" and his "political level," in which he supports anti-war candidates and, like many of the others interviewed, voted for the nuclear freeze.

Those who described their conflict said they thought that many, probably most, defense workers do not weigh their work on a philosophical level; they try to go a good job and leave it at that.

A systems engineer at the Charles Stark Draper Laboratory in Cambridge who works on the MX missile system, for example, said that although he protested against the Vietnam War "strenuously" in college, he does not consider the politics or morality of his work now and does not worry about the weapons because he thinks no one is "stupid enough to use them."

. . . The engineer, in his thirties, says he enjoys his job and the responsibility he has been given. The fact that what he works on is "totally destructive" seldom enters his mind. "I very rarely think of it anymore," he said. "I guess I've gotten a little complacent in the past few years."

The attitude among many workers who seem to distance themselves from the work's philosophical meaning annoys one civilian engineer working for the Department of Defense in the area. He said he thinks young people are particularly likely to view the work as no more than a job.

"When I started work in defense, it was an honor to be in the defense industry," said the engineer, who said he is between 55 and 65 years old. "It was a completely different feeling about the nation," he said.

Mutty, 53, the Raytheon engineer and marketing manager, and Leon Michelove, 50, a metallurgical engineer at Raytheon's Missile Systems Division, both said their support for a strong national defense makes them proud of what they do.

Mutty also said he is "not the slightest bit concerned" about a nuclear war occurring because he has faith in safeguards built into the weapons systems to prevent mistakes or accidents.

"In my work, I don't think about employing the weapons. I think of them standing at the ready," said Mutty. "Our whole posture is that no one wants to use the weapons unless we have sufficient provocation."

Other workers expressed feelings ranging from fatalism to fear to numbness about the prospect of a nuclear war.

"I feel quite comfortable when I go to bed at night that I'm not going to wake up from a flash in the sky, either from one of ours or one of theirs," said Mutty, who lives in Harvard.

Leon Michelove, too, feels comfortable with his work. "I think it's very useful and necessary. I think you could probably call me a hawk anyway," Michelove said. "We need a strong defense and . . . I do the best I can (to see that) it's the best system it can be. I don't have any real difficult nights over that."

Those, like Forman and the engineering consultant who expressed torment about their work, talk often of "getting out." But Forman concluded, at least for the time being, that it would be too costly to his family and himself. Warren Davis did get out and said he feels much better. The engineer who begged off from a military project is encouraged that he may be able to wean himself from at least the most "sensitive" defense work and keep his job.

Most of the others interviewed who felt doubts, however, live with them and with the fact that they would rather be using their skills to solve non-military problems but have found that the jobs and money are in defense.

"There are a lot of things I could do and have done that I'm much prouder of and that are more useful to society," said the GTE physicist. "I wouldn't call it guilt. I would call it," he said and paused to find the word, "regret."

Activity 20: Organizations concerned about nuclear weapons

Many individuals have banded together to form groups dedicated to confronting the nuclear weapons situation. These groups encompass many perspectives and include people of all ages and occupations. The following is a partial list of such organizations:

Student Groups:

1. On May 18, 1981, five women between the ages of 12 and 20 got together to talk about how to get other kids involved in the effort to stop the nuclear arms race.

The result was a new organization, the Children's Campaign for Nuclear Disarmament, and a plan to get children to write to the President, asking him to take action.

They drafted a brief statement, warning of the growing threat of nuclear war and noting that "our leaders are making decisions that affect us, as children, more than anyone else."

Children's Campaign for Nuclear Disarmament
R.F.D. 1
Box 550
Plainfield, VT 05667

2. GRASP is a student group organized to learn about global issues.

"Democracy is rule by all people. We have a right to a say in government. Most of us don't claim it. We say we're too young, or too tired or too busy. We're too dumb. We're letting a minority rule and that's not democracy. It doesn't work."

GRASP
105 Memorial Hall
Waging Peace
Cambridge, MA 02138
(617) 495-3945

3. S.T.O.P. Nuclear War is composed of high school teachers and students who form chapters in high schools or youth groups (e.g., in houses of worship) to initiate projects intended to educate their local and surrounding communities about this most pressing issue. S.T.O.P. NEWS is the vehicle which connects the chapters by offering articles, geared for high school aged groups, on everything from how to run a first meeting to a select set of quotes from post-Hiroshima U.S. presidents; from mistakes to avoid in dealing with administrators to the best resources available for high school aged groups. The newsletter functions as a clearinghouse which identifies the most effective projects and approaches.

S.T.O.P. NUCLEAR WAR
Box 232
Northfield, MA 01360

4. Scott Thompson is a professor at both the Fletcher School of Law and Diplomacy at Tufts University and at Georgetown University in Washington, D.C. Thompson helped to form an organization called Students for Peace and Security (SPS), a network of students on several campuses in America whose purpose is to "enlighten others on the nexus of power and security."

Students for Peace and Security
c/o Scott Thompson
Fletcher School
Medford, MA

National Professional Groups

1. Business Alert to Nuclear War - a new organization open to all members of the business community and formed to alert and educate business people to the dangers of nuclear war.

Alan F. Kay
Box 7
Belmont, MA 02178

2. Educators for Social Responsibility - dedicated to helping educators learn to teach about nuclear war and to stopping the nuclear arms race.

ESR
639 Massachusetts Avenue
Cambridge, MA 02139
(617) 492-1764

3. The LAWYERS ALLIANCE FOR NUCLEAR ARMS CONTROL recently established to educate the legal community about nuclear weaponry issues to that lawyers might contribute their conflict-resolving expertise to arms control efforts.

Ruth Matz
P.O. Box 9171
Boston, MA 02114
(617) 727-1036

4. The NURSES ALLIANCE FOR THE PREVENTION OF NUCLEAR WAR: a new organization of nurses committed to educating themselves and the general public about the severe health hazards posed by nuclear weapons.

Teana Krasover, R.N.
P. O. Box 319
Chestnut Hill, MA 02167

5. PHYSICIANS FOR SOCIAL RESPONSIBILITY: a national, non-profit organization of doctors, dentists and osteopaths dedicated to professional and public education on the medical hazards of nuclear weapons and nuclear war.

PSR
639 Massachusetts Avenue
Cambridge, MA 02139

6. The UNION OF CONCERNED SCIENTISTS: strongly opposes the MX missile system and participates in major media programs and conferences on the arms race and the effects of nuclear weapons. UCS presently has two arms control analysts on its staff, and plans to expand its arms control program.

Lois Traub
1384 Massachusetts Avenue
Cambridge, MA 02238
(617) 547-5552

General Organizations

1. The AMERICAN FRIENDS SERVICE COMMITTEE: a Quaker organization whose local disarmament/peace efforts include educating people about the arms race and the military budget through projects such as "Jobs With Peace" and the nuclear weapons Freeze Campaign; coordinating a disarmament action network to pool the resources of Boston-area peace organizations; and promoting a dialogue between Soviet and American people to create an atmosphere of understanding conducive to disarmament.

2161 Massachusetts Avenue
Cambridge, MA 02140
(617) 661-6130

2. The AMERICAN SECURITY COUNCIL, EDUCATION FOUNDATION - provides materials that support military spending on nuclear weapons.

499 S. Capitol Street, Suite 300
Washington, D.C. 20003

3. COUNCIL FOR A LIVABLE WORLD: a national group, with supporters in 30 states, dedicated to prevention of nuclear war through political activity and public education.

11 Beacon Street
Boston, MA 02108
(617) 742-9395

4. COUNCIL FOR A NUCLEAR WEAPONS FREEZE: the Boston coordinator for the national Freeze Campaign, whose goal is a mutual freeze by the U.S. and the U.S.S.R. of their testing, production, and deployment of nuclear warheads, missiles, and delivery systems. The Council assists groups and individuals who wish to endorse the freeze.

2161 Massachusetts Avenue
Cambridge, MA 02140
(617) 491-7809

5. PEACE THRU STRENGTH: organized by Scott Thompson to oppose Salt treaties and to maintain a credible American nuclear deterrent.

49 East Main Street
Marlboro, MA 01752
(617) 481-7742

6. Peace Academy

Milton C. Mates, Jr.
National Peace Academy
1625 I St. NW, Suite 726
Washington, D.C. 20006

Activity 21: Leonard Bernstein

Composer and conductor Leonard Bernstein has written to the youth of the world about the challenges which face them and the opportunities which await them:

> The generation that preceded yours has been a pretty passive one, and no wonder. It was the first generation in all history to be born into a nuclear world, the first people ever to have had to accept the Bomb as an axiom of life. Behold the Hiroshima generation! You are the first generation since Hiroshima that can look back and say no -- not for me. Thus you are, can be, a new and separate generation, with fresh minds, ready for new thinking -- for imaginative thinking -- if you allow yourselves to cultivate your fantasy. We are counting on you to make the difference.

Connections:

Leonard Bernstein talks about "imaginative thinking." How does his idea compare to Einstein's words considered at the beginning of the course? What kinds of problems do we have to solve imaginatively if we are to survive? What kinds of skills will we need to be "the first generation to look back" and discover a viable way out of the nuclear weapons dilemma? How can students take an active role? Bernstein suggests that students, because of their age and position in society, are not entrenched in a particular viewpoint and can imagine options their elders never dreamed of. Do students agree with that assessment?

Activity 22: A film - Why Man Creates

Connections:

This 25-minute, color film by Pyramid embodies both the meaning of creativity for the creator and society; and why and how humans create. A cinematic marvel, it covers the arts, thought, and interpersonal dimensions. Some students have been concerned about the use of images from certain religious traditions and, thus, a careful review of the details and their historical context may be in order.

Activity 23: A film - Machine

The film you are about to see, Machine, is one that considers human imagination -- the type Bernstein pointed to in the previous reading -- and its potential. As you watch the film, you should consider the role of imagination: what benefits did it supply for humanity? What problems did it cause? When should the imagination have foreseen an abuse of creativity? Who should be empowered to make decisions concerning momentous questions?

Connections:

To a background of dramatic music, the animated film follows a man from his small invention, to his extravagant improvements, to his own eventual execution by his brainchild. This film requires a few viewings, and students appreciate the increasingly sophisticated understanding of the film gained with each viewing.

From viewing #1: What did the machine do? Follow the story line.

From viewing #2: Students may bring up their own experience with being manipulated into needing a technology. The use of television provides a useful analogy to Machine. What is the purpose of TV in students' lives? How often do they watch it? Do they or their parents make plans around TV programs? How do TV ads, newscasters, programs influence their opinions? How easy would it be to turn off the television for a month?

Machine raises the spectre of machines taking over the decision-making process from people. That is, it suggests the possibility of a technology so sophisticated and with such far-reaching possibilities that it may produce consequences which cannot be foreseen and from which there may be no turning back. Examples appear in DNA research, test-tube babies, and handguns. What makes this issue so confusing for people is that we all tend to see that up until now, we appear to have managed to control our technologies. We are talking about a continuum in which dealing, apparently successfully, with the smaller technologies prepares us to believe we can use the same management skills with the more complex and far-reaching technologies. But the nuclear technology is a leap out of the continuum and this fact may require review by students. The release of energy by the nuclear force on earth was introduced by humans. Its power is 1,000,000 times greater than that of any force existing in nature.

Students may be frighted by Machine. Try to categorize responses around issues of control of technology, dynamic pace of change, quantity and/or extent of change produced, exact knowledge of what's going on, feeling of powerlessness. Are the questions that need to be asked of Machine different from those that need to be asked of, for example, the car or the transistor or the TV? Is there something in their altering the fundamental relationship between people and their environments? Between people and their control of their futures? If students are keeping journals, an entry in which they respond to these questions will help them to summarize the points being raised.

Activity 24: "FIRE"

We can't help thinking, what with all the hoo-ha about nuclear energy, about the fix we'd be in if the same daffy dimbulbs who are grabbing all the headlines today had been around when that unknown pioneer snatched a burning branch from a lightning strike way back in caveman times and gave his fellow man fire. We can just hear the outcries now.

"Hey!" says one scruffy fellow. (I think I've seen a descendant of his before at anti-nuclear rallies. At least his distant ancestor could explain his appearance by pointing out that razor blades weren't going to be invented for 100 million years!) "Hey, don't you know that heat causes cancer? Why, just look at the way the skin on my hand is reddening as I hold it up to your fire!"

"Yeah," says a second, "and look at what's happening to that dinosaur steak he's put over the coals -- it's turning black and it's sizzling. It's bound to be laced with carcinogenic substances!"

"Say," shouts another shortsighted caveman, "what if every single tree and bush in the world caught fire at once? I know that the odds against it are 800 trillion to one, but think of the terrible catastrophe!"

Well, I could go on, but I think you get the picture. The way I see it, we're darned lucky that our ancient ancestors had the guts to tell these uninformed critics to go take a long walk off a short land bridge! Fortunately, man has always had enough intestinal fortitude to support progress. There are plenty of nay-sayers around, but we're smart enough to ignore them.

Connections:

This piece, originally written as satire in Looking Backwards, may be used straight to ask what benefits come from technological advancement. In this case, the obvious benefit-to-danger relationship is known. How can one reasonably predict when the positive outcomes will outweigh the true negatives?

Activity 25: WHO IS TO DECIDE?

As you have noted in your discussion of Machine, some inventions can have such far-reaching results that a decision about their development needs to be made before they are developed. But who should make such a decision? Who knows best what will benefit humanity? Scientists, the people who develop the knowledge on which new technologies rest, also ask such questions. Opposing views on this subject have been voiced by two of the most prominent scientists of our age, Edward Teller and Jacob Bronowski:

> Teller: "It is up to the scientist to create and invent. It is society's role not ours to monitor the use or judge its acceptability."

> Bronowski: "Is it true that the concepts of science and those of ethics and values belong to different worlds? I do not believe so."

Whose views most correspond with your views? Are there other solutions you would recommend?

Connections:

After a third viewing of Machine, students may ask: Is the machine or the man responsible for the violent denouement? Apply the statements by Teller and Bronowski. How can a society retain control of the uses to which technology is put? What types of safeguards would they suggest? Who should be on regulatory committees? Clergy? Scientists? Politicians? Binding referenda by all voters? Other? Some classes were asked to stop the film at the point the scientist "should" have seen the long-term effect of the machine.

Comments: "If I could of stopped the man anywhere, it would of been when he began to destroy his surroundings and his natural environment, because everyone had to share it." -a 9th grader

"Sometimes people don't know what's best for them." -a 9th grader

Activity 26: Statements on Ending War

1. War is a constant state of humankind. We might just as well accept that fact. The best way to prevent war is for each nation to build a large, defensive armed deterrent and to hope that the threat of our using it in retaliation will keep others from attacking.

2. What we need to end war is a strengthened United Nations where people can talk out their problems.

3. War is in our genes. It's a biological fact. What scientists should do is to find a way to alter genes so that people are less aggressive.

4. All men are brothers. If we would all remember that and return to the ways of God, war would be a thing of the past.

5. Since people seem to be unable to control their tendency to have enemies, to prevent war we ought to set up complicated systems in which we are totally interdependent. For instance, if there were an electricity grid which connected Soviet and American electrical circuits, and damaging one would damage the other, then either country would be very reluctant to bomb the other.

6. Education is the key to peace. Teachers should teach the horrors of war. They should teach in what ways all people are alike. They should show how waging war always hurts the country who wins as well as the one who loses.

7. Governments cause war, not people. If men would refuse to go to war when their governments declared war, there'd be no soldiers.

8. Each leader of the countries with nuclear weapons should be required to view an atomic explosion and feel the heat.

9. All houses should be equipped with bomb shelters.

10. Countries can't disarm because there is no trust. However, they can stop the technological race and stop proof testing weapons they have.

11. Writing letters to decision-makers in our and other countries to let them know their decisions affect real people who wish them no harm.

Connections:

These statements provide students with the opportunity to assess how they think individual activity can impact on war. A journal entry which compares their ideas to thoughts they expressed at the beginning of the course may help them assess how much and in what directions they have changed.

Activity 27: A Japanese Student

As part of their report to the Second Special U.N. General Assembly Session on Disarmament in June 1982, the History Educationalist Conference of Japan produced a small booklet on peace education. Included in it was the following appeal by a Japanese high school student:

What in the world have grown-ups learned from the war? If we don't do anything now, we will go too far to come back. History teaches us that being silent means consent. Unless we do something now, we will be criticized by our future generations as we now criticize people who failed to stop World War II. Otherwise there will be no people on earth who will not criticize us!

Yes, unless we say 'no' right now, there will be no people living on this planet to criticize us!

--Y. Adachi

Connections:

The phrase "being silent means consent" has great importance to the Japanese student. As students consider what s/he meant, they can recall particular historical events in which that phrase was operationally true. To what extent is it true for their own lives?

Activity 28: An Incident for Personal Responsibility

What do you think about when you are confronted with a situation in which you must take a stand and affect other people's thinking? How might you have reacted if you were a passenger on the D train in this true incident?

"Violence Rides the Green Line"

(from the Boston Globe)

They got on the D train at Brookline Village. But not like you and me. One of them hung onto the large windshield wipers, clinging dangerously onto the back of the train as it was pulling out. Another swung up to the roof. The third climbed into the driver's empty rear compartment through the open window. A man nearby buried his head in his evening newspaper. A black man with graying sideburns watched to see what would happen next. He didn't have long to wait.

The train headed for Brookline Hills. It was 5:30 p.m. Rush hour. But this train was not crowded, another Riverside-bound D train was immediately ahead and had picked up most of the rush-hour commuters. All train 344 had to do was to let people off. Except for the three punks.

The passengers in the rear of the train all seemed to make a concerted effort to ignore the young man in the black teeshirt who sat in the empty driver's compartment at the rear, flipping switches, trying to break into the change box and turning on the windshield wipers. His buddy still hung perilously from the back of the car, dodging the moving wipers. No one could hear what he was shouting; the passengers pretended not to notice.

All but an attractive young woman, who walked to the front of the train as it pulled into Brookline Hills, tapped on the window and told the driver that his train was being vandalized. According to the young woman, "He did not respond. He just looked at me."

A passenger, half asleep in his book "Lust for Life," squinted as he awakened to the uneasiness among his fellow commuters. A woman sitting next to him said, "Why doesn't somebody do something?" He started to rise, but stopped. Just a couple of kids fooling around, he must have figured. None of his business.

The train pulled into the Beaconsfield stop. All three kids were stuffed into the driver's rear compartment. They pulled the curtain aside so that the passengers, now visibly concerned, were unable to see what was going on as the train headed toward Reservoir.

The black man was the only one of the passengers who was willing to take a stand. He leaned against the door of the compartment to prevent them from entering the passenger section of the train. But it was three against one, they were able to shove the door open and scramble past him.

The three punks stood there, oblivious to the confusion and concern they had caused among the passengers. The train pulled into Reservoir, past the numerous inoperative and vandalized cars that stand as testaments to the troubled MBTA. In a loud voice, Black Teeshirt, obviously their leader, said, "Look at all the broken windows in those cars! Wonder who knocked all those windows out?" His two pals snickered.

One of them bit his lip as he tried to conceal a mouthful of expensive orthodontic work. He grinned sheepishly at the passengers, looked at his leader and said, "What do we do next?" Black Teeshirt looked meaner than his followers. He was husky and tried to act tough as he gave orders to the other two. "Wait'll the car leaves Reservoir. We don't want to get nabbed here. Look out for cops."

The train sped off toward Chestnut Hill. The three were jammed once again into the driver's compartment. The black man shook his head and shrugged. "I can't take them on alone," he said to the other passengers.

The man reading "Lust for Life" got up. The train was just pulling into Chestnut Hill as he rapped hard on the driver's window. "There are three hoodlums in the back of the train and they're raising hell, bothering the passengers and tearing up the train."

The driver, somewhat reluctantly, followed him to the rear of the car. He had first opened all the doors. The three young men stood innocently by the rear door as the passengers pointed them out. The driver, like everyone else, was afraid. He ordered them off the train. Black Teeshirt snarled an obscenity as he passed the man who had gotten the driver. "Don't you put your hands on me. Don't you touch me!" he spat.

Two of the young men ran out of the train through the open doors and yelled for their companion to follow. For a brief moment he stood there glaring at the passenger who had brought the driver down on them. Then he bolted.

He ran to the rear of the train and glared at the uncomfortable passengers through the window. He still had a score to settle. He picked up a rock and shattered the window where the man buried in his newspaper was sitting. He shouted another obscenity, as he picked up another rock and shattered a second window.

The middle-aged woman shook her head sadly, "I can't believe they have no respect for property -- no wonder the MBTA is going broke. Isn't anyone going to do anything?" she asked to no one in particular. The passenger who had gone after the driver asked him, "Why didn't you keep the doors closed and radio for some help? Don't you have a phone?" The driver looked at him helplessly. "What's the point? Some judge would just send them home. You should see what they do to these trains. And it's not only here. It's all over. No one cares."

The passenger cared. "They've shattered two large windows back there," he said. "People could have been seriously hurt." The driver responded, "What could I do? They'd just let them off. It happens every day. Even if they murder somebody they let them out."

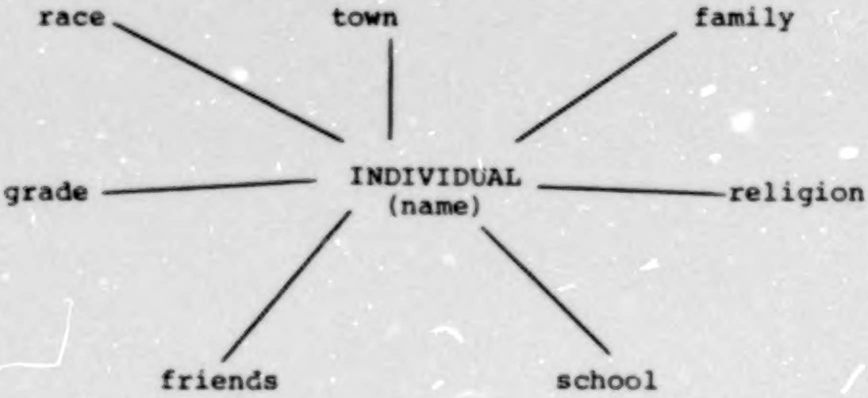
At the rear of the train the passengers stared at the shattered windows. The man behind his newspaper said, "They pay these guys $25,000 a year. For what?" And everyone agreed that something ought to be done. The question is, of course, what, and by whom?

Connections:

This lesson on taking a stand leads to reflection about how others affect us and how we affect others, how we are encouraged to take risks and participate actively in making the world more just, or how we are constrained. How can we apply the knowledge we have learned about the world to our everyday lives? Students should be encouraged to discuss or write in journals:

What can block people from taking a stand?
What can support people to take a stand?
Have any similar events happened in your life?
What helped you to or hindered you from taking a stand?
What kinds of pressures are there on individuals to either take a stand or refrain from taking one?

In a group, brainstorm aspects of society such as family, religion, school, friends, race, political groups, city, state, nation, and values which contribute to an individual's identity. An effective way to deal with these ideas is to construct a diagram:



Each student might construct a personal diagram, putting him/herself in the middle and labelling the aspects that affect his/her ideas. Students can construct personal diagrams, putting themselves in the middle and labelling the groups that they think they do affect and include ones they think they might be able to affect.

As they discuss personal choices, they can consider:

What specific issues do you know about that you could take a stand on and perhaps affect other people's thinking?

What kinds of stands are there for you to take on the issue? Who could you affect? Is writing an article like Goldman's a way of taking a stand?

Who could support you? Are you able to ask for support?

What will be difficult about taking a stand? What will be rewarding?

Activity 29: A class project

It is a challenging and accurate commentary on the modern world that we are continuously pressured by situations calling for our personal response. All facets of life -- from our relationships with family and friends to our participation in teams, school, and community -- provide us with opportunities for dialogue and action. How we act in situations of conflict, how we bring our energy to bear on conflicts, stems from our own values and reinforces our own inner strengths.

1. What situations can we as a group undertake to improve? Why?

2. How can we proceed?

3. What obstacles should we anticipate?

4. How will we react to frustration?

5. Are we informed and committed enough to see the action through?

6. What steps should we follow?

7. How will we measure success?

Connections:

It is hoped that one result of this curriculum will be to empower students to act in their own behalf for the common good. The class should undertake some projects -- with foresight and commitment -- to actively address issues that are important to them. As the class brainstorms on situations demanding their response (false alarms, fairness in student government, stealing from lockers, and other community issues), they should be encouraged to take steps to try to change one of the problems. Perhaps the most important evaluative criteria of this curriculum is whether students become involved in making the world safer, more just, and more caring. By looking at their own lives and their own situations, they can decide what kinds of steps they can take to confront the difficult challenges that face us as individuals and groups.

Activity 30:

A poem -- "Praise of Learning" by Bertolt Brecht*

Learn the simplest things. For you
whose time has already come
it is never too late!
Learn your ABC's, it is not enough,
but learn them! Do not let it discourage you,
begin! You must know everything!
You must take over the leadership!

Learn, man in the asylum!
Learn, man in prison!
Learn, wife in the kitchen!
Learn, man of sixty!
Seek out the school, you who are homeless!
Sharpen your wits, you who shiver!
Hungry man, reach for the book: it is a weapon.
You must take over the leadership.
Don't be afraid of asking, brother!
Don't be won over,
see for yourself!
What you don't know yourself,
you don't know.
Add up the reckoning.
It's you who must pay it.
Put your finger on each item,
ask: how did this get there?
You must take over the leadership.

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*We included this poem as it was written, and acknowledge both the integrity of the work and its sexist component.

FILMOGRAPHY

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Teleketics, 1229 S. Santee Street, Los Angeles CA 90015

"Children of Hiroshima" (slides) -- (617) 864-0999

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"Is It Always Right to Be Right?"
Churchill Films, 662 N. Roberts Blvd., Los Angeles CA 90069

"Joseph Schultze"
Wombat Productions, Little Lake, P.O. Box 70, Ossining NY 10562

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Center for Humanities, 2 Holland Avenue, White Plains NY 10603

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"With Babies and Banners" -- American Friends Service Committee

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